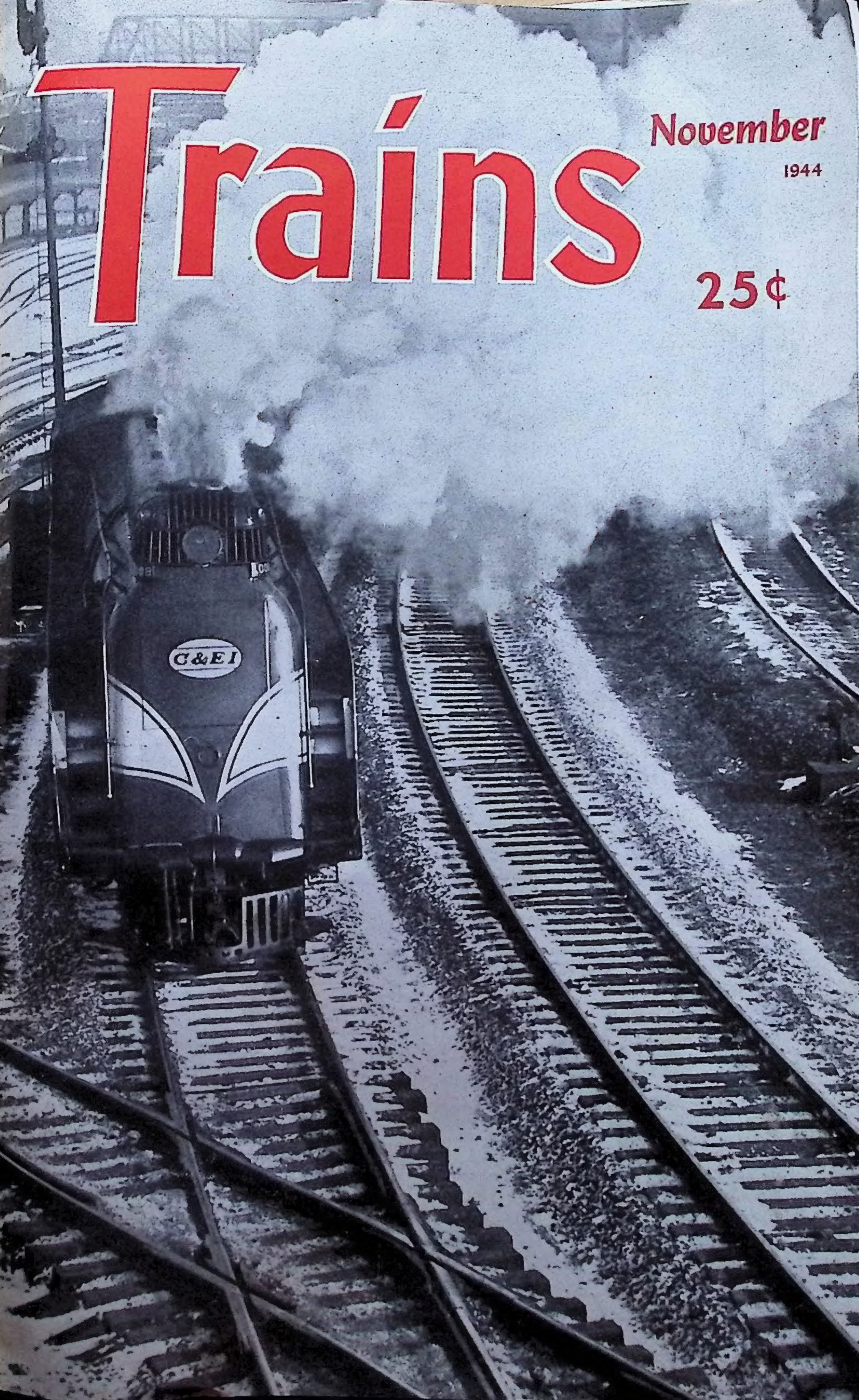
Trains

November
1944

25¢



Perhaps I'm one war older than you are!

Believe me, after the last war I saw what happened. Will you let me give you some advice?

•

If you've got a job today—for your own sake, fellow, be smart! Think twice before you fight for a wage increase that might force prices up and land you behind the eight-ball in the end.

Salt away as much as you can out of your present wages. Put money in the bank, pay up your debts, buy more life insurance. Above all, put every extra penny you can lay your hands on into Uncle Sam's War Bonds.

Nobody knows what's coming when the Germans and the Japs are licked. Perhaps we'll have good times. Okay. You'll be sitting pretty. Perhaps we'll have bad times. Then they're sure to hit hardest on the guy with nothing saved.

The best thing you can do for your country right now is not to buy a thing you can get along without. That helps keep prices down, heads off inflation, helps to insure good times after the war.

And the best thing you can do for your own sake, brother, if there *should* be a depression ahead, is to get your finances organized on a sound basis of paid-up debts—and have a little money laid by to see you through!

4 THINGS TO DO
to keep prices down
and help avoid another depression

1. Buy only what you really need.

2. When you buy, pay no more than ceiling price. Pay your ration points in full.

3. Keep your *own* prices down. Don't take advantage of war conditions to ask for more—for your labor, your services, or the goods you sell.

4. *Save.* Buy and hold all the War Bonds you can afford—to help pay for the war and insure your future. Keep up your insurance.

HELP US KEEP PRICES DOWN

A United States War message prepared by the War Advertising Council; approved by the Office of War Information; and contributed by this magazine in cooperation with the Magazine Publishers of America.

FROM WAGON WHEEL TO STAINLESS STEEL

A Glance into the Past . . . and the Future

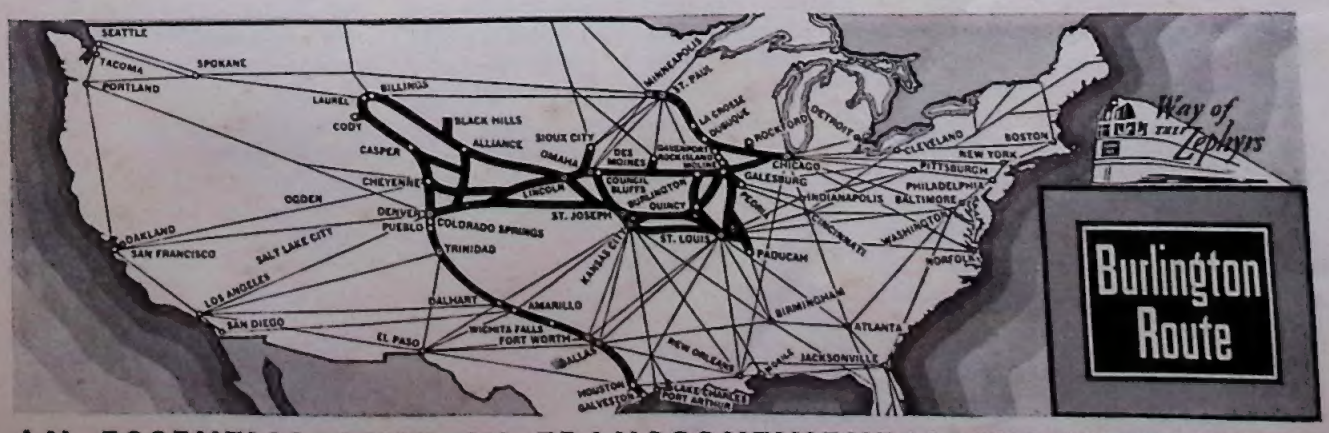
Not so many years ago, covered wagons snailed their way Westward—fifteen miles per weary day. Against this background of tedious travel, the Burlington Zephyr era, which began just ten years ago, stands in striking relief.

When the Pioneer Zephyr, America's first Diesel-powered, streamline train, made its record-breaking, non-stop speed run from Denver to Chicago in May, 1934, it was telling America that a new day—a Z day—in railroad transportation was at hand. It made that 1015-mile run in only 13 hours and 5 minutes—an average of 77.61 miles per hour—a record eclipsed only by a bigger Zephyr in the opposite direction two years later.

On Armistice Day, 1934, the Pioneer, "Daddy of 'em all," began its daily round-trip run, Lincoln and Omaha to Kansas City—first streamline train to enter regular service. In April, 1935, twin trains inaugurated Zephyr service between Chicago and St. Paul-Minneapolis—twice daily since June, 1935. In May, 1936, Burlington Zephyrs established the first regular overnight service (16 hours) between Chicago and Denver.

Today, the Burlington has fourteen stainless steel Zephyrs and a fleet of fine steam trains serving America—carrying more passengers than ever before in Burlington's history.

To the question "What's ahead for the railroads?" we point to the progress of the past ten years with the assurance that there will be equally dramatic advancement in the peacetime years to come.



AN ESSENTIAL LINK IN TRANSCONTINENTAL TRANSPORTATION

Trains

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American railroads produce the world's most efficient common-carrier mass transportation and are the foundation of our country's industrial productivity.

WITH all the talk about "all first-class mail by air," we wonder if anyone has stopped to consider the cost to the user, or if it is assumed that the taxpayer will subsidize the increase? At present rates the post office does not make money on handling mail, and even in the rosy postwar dreams of the airway people, air mail transportation in volume will still cost three times as much as first-class mail by rail. Eight cents is quite reasonable for many a letter which must needs get there in a hurry, but how about the huge bulk of ordinary mail—bills, sales letters—on which even the three-cent rate mounts to an appreciable expense and on which time is not an element? And how will the railway mail facilities be supported? They will necessarily be maintained as a standby in case the air mail is grounded by bad weather. On the other side of the picture will be the need for maintaining air strength as a basis for national defense, and the desire of business for a better air-mail service just for those instances when speed is essential. The question is far more complicated than the slogan "All first-class mail by air" would indicate, and we feel it will be hard to improve upon the railroads as economical carriers of mail in large volume.

British Railways War Job

British railways in wartime are doing a great job under great difficulties. One hundred thousand railwaymen have been called for military service. Fifty complete passenger trains have been lost in air raids. Yet 220,000 special trains for troops and their equipment were run from the beginning of the war to February, 1944. There are now 5000 troops trains a month.

No excursions are run now at all. (In peacetime there were 17,500 half-day and evening excursions during the summer.) Instead, there are 1000 extra trains every day to carry workers to and from war factories; and 400 special trainloads of coal are moved every week. More than 20,000 goods trains a week are being run, and nearly a million loaded wagons. Through one mainline junction alone, 3000 wagons pass every 24 hours in each direction.

At the time of Dunkirk, 620 emergency trains were run in eight days, carrying 300,000 troops from seven ports in the southeast of England. At the busiest time, 100 special trains were worked in 24 hours. Toward the end of 1941, locomotives and other rolling stock were rushed to Persia to speed supplies to Russia over the Trans-Persian Railway. One hundred forty-three locomotives were sent, specially equipped, with tenders and spare parts, and 1600 steel-frame 12-ton wagons were built in record time. By working night and day, the assembling works fitted together the 1800 parts of each wagon so that one was completed every 37 minutes.

Preparations for the North African Expedition involved the running of 440 special troop trains, 680 special freight trains, and 15,000 railway wagons by ordinary goods services, to carry men and materials to the embarkation ports.

When civilians were evacuated from London this summer because of rocket bombs, passenger loads of 1500 to 2000 were not unusual on trains with seating capacity of 600.

82-Car Mail Train

Probably the longest individual mail train in history was run from Chicago to Council Bluffs Transfer on the night of October 17 by the Burlington Route. It consisted of 82 mail and refrigerator cars, loaded with Christmas packages for servicemen overseas and hauled on passenger-train schedule by a 4-8-4 steam locomotive as far as Galesburg and then by a 2-10-4. The refrigerator cars were used because many of them are moving westward empty at this season.

This and a then-record 70-car train October 13 were part of the largest mail movement the Q has handled in all the 60 years it has been moving the transcontinental mails between Chicago and Council Bluffs Transfer. More than 1200 cars were handled between September 21 and October 17, and the largest day's movement was 103 cars on October 15.

Pullman Plans

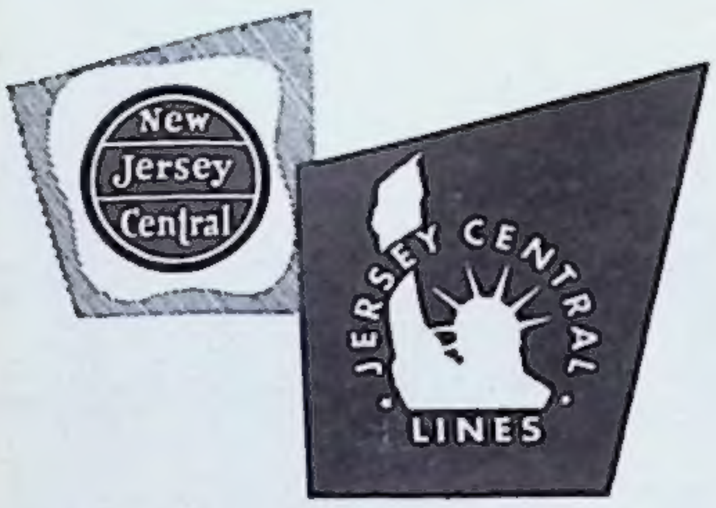
The Pullman Company has proposed to the Philadelphia court which must approve details of its divorce from Pullman Standard Car Manufacturing Company that it sell its physical assets, including cars and service facilities, at book value to a new company which may be formed by the railroads to take over the operation of the sleeping-car business. It was also revealed that the Pennsylvania Railroad proposes to own and operate its own sleeping-car service.

Pullman, Inc., has until October 5, 1945, to segregate its manufacturing and sleeping-car operating subsidiaries, and should the railroads decide not to purchase the property, or should the court fail to approve the Pullman proposal for railroad purchase, other plans may be presented by either Pullman or the court.

Lightweight cars, 609 in number, may be included in a general sale or may be sold directly to the roads to which they are permanently assigned, but 4034 standard cars and 2208 tourist sleepers are definitely included in the Pullman proposal of sale. The railroads would need about 30 million dollars in cash, including nearly 6 million dollars working capital, to finance acquisition of Pullman assets. If all railroads participated pro rata this would mean $1000 of capital for each $1790 of sleeping-car business on the road in 1940.

Anticipate Florida Travel Jam

Railroad officials fear that this season will see a recurrence of the bad Florida travel situation of



Old and new (right) heralds of the Central Railroad of New Jersey. The new Statue of Liberty design is being applied to freight cars, locomotives, and ferry boats.

last spring, when thousands of people found return-trip reservations difficult if not impossible to secure. "The situation may be even worse this year," comments George L. Oliver, general passenger agent of the Florida East Coast, "as more people seem to be coming to Florida for the winter; yet because of increasing military movements we may have even less space than last year to handle the return movement."

A large percentage of northbound space on FEC trains is reserved by the government for movement of military personnel out of the Miami Beach Redistribution Center. This makes it easier for civilians to get into Florida than back north again. Adding to the difficulty is the fact that southbound travel spreads over a period of six months or more while the northbound movement is concentrated in about two spring months.

Government officials and the O. D. T. are expressing concern over the situation. Last year many people had to wait weeks to secure northbound reservations, and no small number maintained all-night vigils at the railroad ticket offices in order to be first in line in the morning.

Passenger Cars in Offing

With prospects of new passenger cars for the first time since Pearl Harbor, roads are shoving to get in line. Following New York Central's order for 300 cars, costing $20,000,000, and probably the biggest passenger car order in history, the Santa Fe has asked for bids on 80 lightweight cars, the Northern Pacific for 24 or 36, Wabash for 7, the Minneapolis & St. Louis for 6 stainless steel streamlined coaches, and the Long Island is planning to build at Altoona 10 double-deck multiple-unit cars, five motor and five trailer.

Odds and Ends

The Army has moved 97¾ per cent of its troops by rail, and 92 per cent of its freight and express has been handled by the railroads. . . . All rail lines on the Cherbourg Peninsula have been operating under the train movements section of the Transportation Corps, sponsored by the New Haven. . . . When one Seaboard dining car on a troop train was set out "bad order" at Athens, Ga., the other dining car served 1734 meals in one day, which should be a record for a 48-seat diner with crew of steward, four cooks and six waiters.

In order to eliminate doubleheading or splitting into two sections, the New York Central's *New England States* now is powered by one of the new L-3 Mohawks right through to Boston, instead of by a Boston & Albany Hudson. . . . The Mohawk engines are being used quite generally on the Central's main trains between Harmon and Cleveland, and while permitted only 70 miles per hour they are maintaining running time with 17-car trains. Hudsons generally furnish the power west of Cleveland, and smart running is required to make up 10 to 12 minutes lost at a slow order where mile-long Sandusky Bay drawbridge is being repaired. Except for one month when bad coal was encountered, the NYC is turning in a very creditable on-time performance under wartime conditions. . . . The Pennsylvania's experimental turbine locomotive, 6-8-6 wheel arrangement, No. 6200, has been seen on the road, but no official announcement has been made. . . . *Wheel Clicks*, bulletin of Railroad Boosters, Los Angeles, devotes an interesting issue to the Peninsular Railway, now-abandoned electric line in the San Jose - Palo Alto territory south of San Francisco. A copy may be had by sending 25 cents to Mrs. A. F. Melching, 1432 Hauser Blvd., Los Angeles 35. . . . One of the UP-C&NW *City of Denver* trains has been reconditioned and the other will soon be shopped. Except for repairs necessitated by accidents, this is the first time either train has been shopped or has missed a scheduled run since they were put into service June 18, 1936.

The Atlantic Coast Line is now using its 2-10-2 locomotives out of Richmond. They were formerly confined to the south end of the road. . . . The B&O has connected its single-track Toledo and Ohio division lines just east of Chillicothe yards so that it now has, in effect, a double-track line between Chillicothe and West Junction, 14 miles. . . . Out of every dollar paid by a passenger for railroad fare, 31 cents (exclusive of the 15 per cent transportation tax) goes to the federal government in taxes. . . . Class 1 railroads put 18,774 new freight cars and 579 new locomotives in service during the first seven months of 1944.

A. C. Kalmbach.

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Cover photo by Max F. Kolin.

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Rapid Exhaust

BY HOWARD W. BULL
Fireman, Southern Pacific Lines

Take a ride from Oakland to Gerber in the cab of one of Southern Pacific's new "war baby" 4460-series locomotives

Lima built 'em in 'forty-three . . .
Now we wheel 'em down Espee.
Rapid exhaust! Hear the "varnish" roar!
Big steam hog! Big four-eight-four!

RAPID Exhaust. That's what they call fast passenger runs out here on the far-flung Southern Pacific, sprawling from New Orleans, La., through Texas, New Mexico, Arizona and California to that northern terminus, Portland, Ore. Strategic rails, these, for western United States war freight—and for Rapid Exhaust. Don't think the passenger trains are unimportant. More essential civilians are traveling than ever before, as well as soldiers, sailors, marines, seabees, merchant seamen, all trying to get home for a few days, or back again to duty. Just ride the smoker some night on "24," for instance, between Oakland Pier and Gerber, and listen to them. Then you'll realize how important this Rapid Exhaust is.

In normal times a fireman would put in from 12 to 15 years before standing a chance to hold one of these fast Oakland-Gerber jobs. Now, in wartime, the seniority list moves fast, and I recently held that very job with less than two years' rights. I had fired troop trains before (we call them "main trains"); once I had 16 Pullmans full of sailors between Gila Bend and Tucson, down Arizona way. We double-headed that trip, using two big 4300's, the old reliable on Espee for passenger, express and fast freight for years. Our "main train" boasted a pair resembling 4315*—streamline shrouding along the boiler top and sport-model cut-away cab, but I recall the number of the second engine, which I fired, was 4385. That was strictly a rapid trip then. We covered 128 miles, Gila to Tucson, up the steep grade to Estrella and down across country on the east side, in 2 hours 30 minutes, including a stop at Maricopa to give both big engines a hearty drink. We averaged better than 50 miles per hour; we rolled Rapid Exhaust.

But this run, Oakland Pier to Gerber, 184.9 miles, is regularly scheduled passenger — six different trains in all, three each way in turn. Slowest in over-all running times are Nos. 19 and 20, No. 20 consuming 6 hours 20 minutes. However, these two trains stop not only at practically all stations but at sundry lanes, sideroads and cowpaths as well, to pick up or dispatch milk cans, regular express, a local passenger. Needless to say, "19" and "20," known to the public as the *Klamath*, really step it up between stops.

Next in line come Nos. 17 and 18, whose schedules are somewhat faster and whose stops are noticeably fewer. This pair bears the title *Oregonian*, a famous old name with Southern Pacific.

Since the newer, faster Cascade line of Espee was opened some years ago, the once well-known *Shasta Limited* has been discontinued. Today the *Cascade* takes its place, and has been consolidated with still another train, the *Beaver*, formerly Nos. 11 and 12, which until early 1943 ran on its own schedule. Once all-Pullman and extra-fare, the *Cascade*, Nos. 23 and 24, is to-

* See page 26, May 1944 TRAINS.

Mark Davis, 3434 W. 82nd St., Inglewood, Calif.

day a non-extra-fare train carrying coaches and Pullmans and operating on the fastest through schedule, San Francisco to Portland. Under its consolidation with the *Beaver*, the *Cascade* carries a limited tourist-sleeper space, but its standard Pullmans are still the very finest, comprising sections, bedrooms, compartments and drawing rooms. Almost invariably at least two of the usual four or five coaches are lightweight streamlined equipment, while the others are modernized, completely air-conditioned heavyweight cars. Except when such equipment is unavailable, air-conditioning is an accepted standard on all these trains.

Over the Oakland-Gerber portion of its run the *Cascade* today averages approximately 42 miles per hour; prior to the wartime schedule cuts the speed was about 48 miles per hour. The 112.8 miles of single track from Davis to Gerber is still covered at an average of 46.67, whereas formerly this figure was over 52 miles per hour. But she's still fast, still definitely Rapid Exhaust on her 4-hour 25-minute dash from the pier to the Sacramento division point and outpost town of Gerber.

Want to take a trip in the enclosed, steam-heated cab of one of the new big 4-8-4's, Espee's newest and finest 4400's, the "war baby" 4460 series? Come along!

The engine crews for the Oakland-Gerber

Howard W. Bull.

No. 4407 on the table at West Oakland roundhouse (top). She's one of the earliest of the 4-8-4 General Service type SP locomotives. A big man in a big cab is "Big Lizz" Charlie Clark, engineer on the Oakland-Gerber passenger run described in the accompanying article. The next photo is the fireman's view from the cab of Train 23 as a fast freight passes in the opposite direction. The bottom view is back over the top of the train.

passenger pool work as follows: east on No. 20, west on No. 17, east on 18, west on 23, east on 24, and back to Oakland with 19. Then they lay over a couple of days and repeat. Their runs always start at Oakland Pier, where ferries still bring passengers from San Francisco to board the eastbound, the northbound and a few of the southbound trains. The traveler who really likes atmosphere will find a thrill in this ferryboat crossing; it's part of the flavor of old San Francisco which even the mammoth Bay Bridge cannot quell.

But we're going out on 24 tonight; and she's the "varnish."

Rapid exhaust! Hear that "varnish" roar!
Big steam hog! Big four-eight-four!

Yes, sir, it's the 4462 tonight, with 73½-inch drivers, boiler pressure of 260 pounds per square inch, 468,400 pounds of engine alone, 6080 gallons of fuel oil and tank filled with 23,300 gallons of H_2O. You might refer back to your March 1944 issue of TRAINS and look at page 37. You'll see the 4462 pictured there together with a lot of interesting information. Notice that the War Production Board has a definite finger in this pie, for she's a "war baby" with a 1943 building date. Whereas their older sisters, also big 4-8-4's, carried 300 pounds of steam and rolled on mighty 80-inch drivers, the newer 4460's were restricted. W. P. B. said 73½ was "plenty of driving-wheel inches," best suited for either wartime freight or passenger work. Well, these babies have what it takes and they ride like Pullmans. . . . Let's get the 4462 going.

First thing, meet my hoghead. He's "Big Lizz" Charlie Clark, one of the slickest engineers on the SP, with lots of years behind him and a few yet to go. That nickname fits; Charlie is a huge man, yet he can handle an engine with kid gloves.

We find our big iron steed waiting on the engine lead beside the Oakland roundhouse. Charlie checks her over while I start heating the oil; it'll be stone cold, freshly filled clear to the top! That's bad, but then some of the hired help around roundhouses nowadays don't understand what that means. I put the big numbers up in the indicator boxes, midway along each side of the boiler: "24" straight up. No sections following tonight; no green nor other classification lights of any color this trip. The water glasses check. Fire box looks pretty

good; not much carbon and the flue sheet's dry. Now let's crack the water pump; okay, she perks. We've got our tools and supplies, lanterns (one red, one white) are lit. headlight and rear lights work, there's waste on the engine and water fills the drinking-water box. At last everything checks and I call, "Okay, Charlie, let's go!"

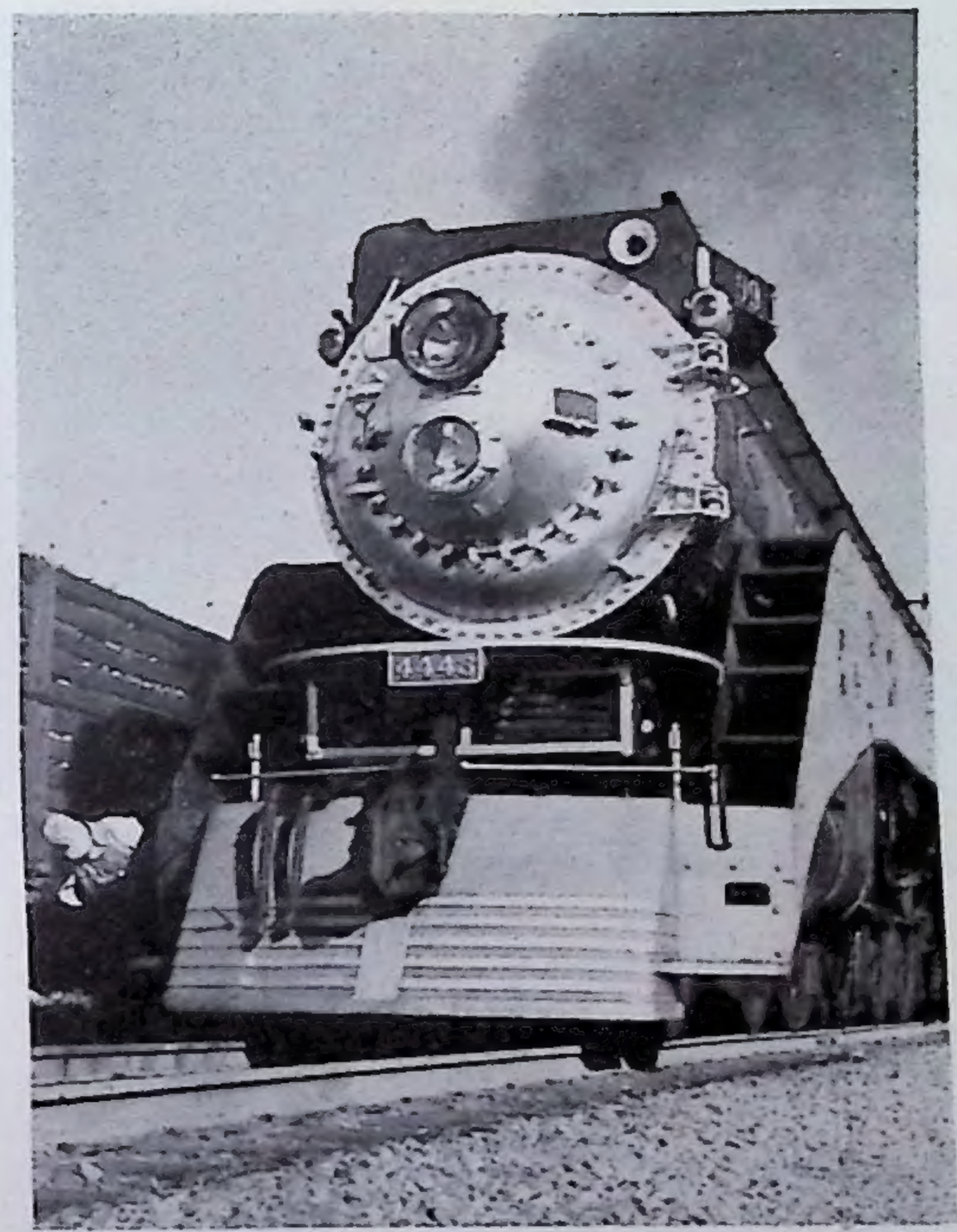
Backing-light on, we roll slowly back. I start down the right-side gangway ladder just as—*switch!*—the air goes into "stop." That's the automatic train-stop test, just to make sure it's in working order. To release the brakes after this track test, which is caused by a test block between the rails at this point, I release the automatic feature beneath the cab on the engineer's side. We make a second test a bit farther on, then slowly back to a red dwarf signal and the phone booth. Here I climb down and ring up Oakland Pier Tower.

"Twenty-four," is all I say into the mouthpiece.

"Okay," is the reply, and I hang up.

Back on my seat box, I watch the dwarf signal down on the ground close to the rear of the tank. Still red. Maybe we'll have quite a wait while yard engines make up other trains under the long sheds on the pier; maybe not. There it is: "Clear." We roll back again, on the green signal, proceeding at reduced speed through the interlocking until finally we ease past the big tower and couple onto our train. The air test is made. Then we get a signal to cut in the steam heat, usually my job. I'd better remember to shut it off, too, going through Corning, or a car hand in Gerber might get burned. On 19 and 20 the steam heat must go dead before reaching Davis as well; those trains do switching there—setouts and pickups, baggage, mail and express.

I think about my fuel oil about now. The measuring stick told me just how full, too full, that tank is. Man, but it's easy to boil one of these big babies over, and what a resultant mess! Seems like I did ooze one over one night; but I've been fortunate—no bad cases of "eruption" as yet! You see, Mr. Traveler, comfortably seated back there in your private bedroom, the problem is: "We've got nearly 6080 gallons of thick, sluggish, cold oil. To atomize and burn that oil properly it's got to be just about "so" in consistence; not too thick, not too cold —but neither should it be too thin nor too hot. The time element is involved in Rapid Exhaust. If the fireman tries to hurry this heat-



Grant Oakes.

ing process, she may boil over. If he's too cautious—well, our big 4-8-4 won't steam!

"Highball!"

Back along the line of coaches and Pullmans a lantern arcs skyward. Another, closer to the engine, relays the signal. It's 4:35 p.m.

"Highball, Charlie!" I call across the cab, and the huge 4462 draws her first steamy breath of life for the fast run ahead.

Before taking this job I made a couple of "student trips" up and down the line. Reason? To spot the color-light and lower-quadrant semaphore signals, for they are not the only lights along the way. The congested area from Oakland Pier as far out as Martinez is dotted with naval, industrial, bridge-structure and other forms of lights, some of them very confusing and in close proximity to the railroad signal lights. Here Southern Pacific's double-track right of way fits snugly between the lapping waters of the bay shore and low-lying cliffs, or runs through thick-clustered industries or busy suburban yards. The curves are both frequent and sharp, and an engineer wants a fireman who calls "Clear!" or "Yellow!" or "Red!" in a hurry!

Between Oakland and Berkeley we'll pick up our automatic-train-control track, which protects us as far as Martinez, right through the

Howard W. Bull.

crooked yard-infested areas where it's most needed when running Rapid Exhaust — a protection given in addition to automatic block signals. But it's still up to the fireman to "call 'em." We don't want any automatic "bigholing" on this job! And talk about your tricky signal lights! I recall very vividly one particular permanently installed naval light, a bright yellow one, which is located at signal-light level and of about the same intensity. It fooled me the first time and I called "Yellow!" but Charlie knew there was no wayside signal there, and so I learned! This light always appears on the fireman's side just across a little cove skirted by our main line, but *our* light indication is beyond the point where this one shows. Got to know where you're going, with Rapid Exhaust.

"Clear!" I shout to Charlie, as we roll out of the Pier Yard and head toward our crossing with a double-track freight line right where we make our first left curve. "Clear again!" I've spotted that lurking signal snuggled against the pier legs of the Southern Pacific's now-abandoned electric line, and then we clatter over the crossing. It's just a short sprint to 16th Street Station, where we'll pick up more passengers, mail, baggage and express.

"Clear, Charlie. Nobody on the westbound!"

Got to check that for sure. If another train is unloading passengers on the westbound main line, those people will be using walkways across our eastbound rails; we can't enter the station till he's moving again. Or there might be a hand baggage-truck unwittingly left afoul of our track. Don't keep the engineer in the dark; on track curving to the left, the fireman is his eyes.

A short stop here and we're off again. Less than four miles to Berkeley, and there we'll make what we hope is our last halt till we reach the waterstop of Davis. Maybe some bird will "ding" us. More about that later. Right now I notice she's not steaming too well, not while she's carrying the water that huge boiler needs. Could give her a shot of sand here—but no, better wait for that long stretch the other side of Berkeley, where there are no grade crossings. Then I can give her a good cleaning out.

Just a pause at Berkeley. We should leave there at 4:55. It's 5:02 when we pull out. Ought to make that up okay. But say, how about that oil temperature? Got a gauge in front of me, but the blamed thing registers off the oil line to the burner, not from the tank itself. I've been having to use the superheater,* and therefore the reading on the gauge is not the true tank temperature. Got the tank heater on, though, so let her ride.

Here's that long stretch. Charlie whistles for the last off the road crossings for awhile; we're rolling now. I sand her out. . . . Give her plenty, boy; let that black soot pour out along this stretch . . . no buildings of any consequence to smudge up . . . no crossings to watch. Give those flues and tubes a chance; we want all of those 260 pounds per square inch. We'll cut back a quarter-turn on the water pump, too; she's hooked up some—and now, watch her steam!

Through Richmond, San Pablo, Pinole! Pinole's an "open station" again; fireboy's got to watch that order board. They might have something special for us . . . or they *might* spring a test to see if we're on our toes. Even the "varnish" is subject to that. Nope . . . she's okay. "Clear board! Let 'er roll!"

We squeeze closer to the water line of the bay. A signal looms across an expanse of water to my left; it's angled so I can see it from here. "Clear!" I shout. "Clear!" echoes Charlie. Our rails curve away from it at the moment, but the arc described will bring us around beside that bright spot of green in no time at all. Then we'll swing sharply to the right and then, not far beyond—well, there are busy, fussy, war-weary switchers working alongside the main line these days. We're making up some of those lost minutes, yet not much more than holding our own so far. Sharp curves, these!

"Yellow!" booms Charlie from his side, and he says other things too. This, gentle reader, is your introduction to a gentleman known in railroad circles as the "dinger." In reality he's one of a few thousand or so yardmasters who shuttle the war freight in and out of large or small reshuffling points, like this one up

* Not to be confused with the superheater within large flues for dry-steam generation; this superheater is a direct supply of steam applied around the oil line which goes to the burner, for quick heating of sluggish oil.

Howard W. Bull.

South of Gerber in the rich Sacramento Valley, No. 23, best Portland - San Francisco train, pounds a grade. It is a wartime consolidation of the all-Pullman Cascade and the economy train, the Beaver, which still retain their separate identities in timetables. Lower photo was taken during the 10-minute stop at Gerber, with No. 4414 at the front end of 23 getting water, service and a new crew.

ahead of us. We cannot yet see it, but there must be either a freight or a switch engine working up ahead, using the eastbound main. The "dinger" for this small bayside yard, which may stretch for miles parallel to our own rails, didn't get this man, whoever he is, into the clear for 24. Our next signal indication will probably be red, and it's easy to see why the gentleman in question rates such a high-sounding title as "dinger." He can prove to be one swell "gummer-up" on any man's railroad, yet he has his own problems, we'll admit. But remember, "dinging the varnish" is serious business, for only by keeping the passenger trains somewhere near their schedules can the war freight be kept rolling. Not only is it important to get those service men and essential civilians there on time, but it's important to keep a railroad *running*. A delayed train lays out another train, and so on down the line. You can't do a good job of railroading and have no respect for schedules. So, Charlie and I don't like it, when, rounding the next curve at reduced speed, I spy the next signal and shout "Red! A red one, Charlie!"

Some things can't be printed! Let imagination have its free reign! But time heals all manner of wounds, and even a much-maligned

yardmaster is soon forgotten, for now once again the *Cascade* is rolling along the snaky bay shore.

Through Martinez, around the sharp curve, and up—up—up, till finally we come out on the beautiful, imposing Carquinez-Straights Bridge. It's a draw, but seldom is the movable span used—only for tall masts, so high is this huge upper bay bridge. And then we leave the cavernous openwork of metal trusses and dash away to the right and down onto leveler country ahead. "Rapid Exhaust" comes into its own. We should have gone through Martinez at 5:30. Actually, time ticked at 5:41 as we swung by the depot. And today is one of those certain odd-days-of-the-month to be reckoned with, for today we've a "fast man" on our tail, that long yellow snake-like streamliner, the *City of San Francisco,* train No. 102. He's due to cruise through Martinez back there at 5:53, and he'll sail through Davis, 44 miles east, where we leave the double-track Overland Route, at 6:35. We're due there 10 minutes ahead of him. . . . No. 102 is on an average schedule of a little better than a mile a minute for the 44 miles; we're carded to average 48. But we're 11 minutes late; 44 miles in 44 minutes! Can we do it with our heavy, standard-weight string of coaches and Pullmans—all heavy except two streamlined cars? Or will we have to crawl into the hole at Suisun-Fairfield? . . . Now we curve to the left, then straighten out for the first real burst of speed as we bear toward the north and Suisun!

The 4462, her oil now nice and warm, takes to the tangent like a thoroughbred, her 14 cars following in one great, even flow of mainline speed. From Bahia to Suisun is nearly 11 miles. We cover that in nothing flat. Charlie pinches 'em down for the curve and the speed limit through town; the air horn is blaring now. Whirling drivers crash through frogs and over points where Suisun's small yard surrounds us and intermingles at mainline switches. It's dusk; I flick on the headlight. Twenty-seven more high-speed mainline miles lie ahead on the highliner double-track to Davis, while somewhere not far behind is that Diesel-powered streamliner, if she's on time. One again the 4462 is working Rapid Exhaust, and now we know that once we've passed that slow order beyond Tolenas we'll be in the clear.

Yes, "*Lima built 'em in 'forty-three . . .*
Now we wheel 'em down Espee!"

Some locomotive, this big 4-8-4 GS-6 type!

Longest and heaviest railroad bridge west of the Mississippi is SP's double-track Martinez-Benicia span across Suisun Bay, 35 miles from San Francisco on the main line north and east. Opened in 1930, it replaced a former train-ferry service. The structure, 5603 feet long, cost 10 million dollars.

Southern Pacific

We're wheeling the "varnish" tonight, mowing down the miles, and we're not going to "ding" that "fast man" behind us, either. Due at Davis at 6:25—and into Davis we go, on our own right of way, headed north—on time!

While I'm taking water, just finishing and banging shut the manhole cover, 102 blares in the west. When we're drawing our first steam to leave town we can see that long yellow snake coming like a shot. On the opposite side of Davis Station, which is located in the center of the wye serving east, west and north connections, the streamliner suddenly screams past in her own right-hand curve while we pound away to the left, to the north. Guess we didn't do so badly. No. 224, the *Senator,* is a steam train — fastest scheduled steam job between Oakland Pier and Sacramento. In fact, she consumes just one more minute for the run than the streamliner. The schedule allows her 47 minutes for that mileage we just covered in a bit less. We didn't do half bad!

Now we've 112 miles to go on good single-track railroad. We'll meet 17 at Woodland, 10 miles out. From there, aside from slow orders over a few old bridge structures, it's smooth sailing. We're usually a bit late out of Woodland after that meet. We'll really cover that last hundred miles to Gerber. And at Corning, don't forget, off goes the steam heat.

That's how we wheel the "varnish." Good engine . . . good roadbed . . . good engineer. Into Gerber and the end of our day's work at 9 p. m. Let the Shasta men have her now. We want food and sleep. This is our short layover. We're on duty again at 3:45 a. m. Got to go back on 19 . . . *that* one! Stops everywhere. Fireman takes plenty of lantern signals for spotting mail and express. Engineer makes plenty of stops and starts. Delay at Davis while that big PMT (Pacific Motor Transport) truck unloads half a baggage-car; setouts and maybe pickups to make, too. What a difference, going back on 19. But it's all service designed for a specific purpose; it's all Rapid Exhaust.

There's lots more to tell. There's the time we went down on 19 leaving a smudge across the valley, because the 4367 was leaky and wouldn't steam. Used a boxful of sand that trip. There are those all-daylight breezy runs to the city with 23, the westbound *Cascade,* when you hardly touch the firing-valve or water pump for a hundred miles, so steady is the going—and smooth. There's the fireman's view alongside the bulging boiler of that westbound curve below Suisun where begins the climb to the big bridge; those rails bend away to the right there somewhere—seem to get lost in the marsh growth and disappear. But, racing beneath that billowing train of grayish smoke that waves back over your train, your big 4-8-4 bears down upon the "vanishing point" at 65, 70, maybe 75. Then you feel the air and the big girl noses to your right, leans, and takes it grandly.

And there was the time I rode the 4413 to learn more about those tricky signals, when she developed air-brake trouble, and at Davis they gave the crew another "13," the 4313—so the crew said I was the jinx and I rode in on the "plush." And that sign above the gaping exit at the bay end of Oakland Pier train shed, which instructs trucks weighing more than a very few thousand pounds not to go beyond that point while we roll our 468,400 pounds of engine (not to mention the tender) through that very portal and to end-of-track on the pier, causing us to smile in wonderment as we do it. Yes, it's quite a game. It's an important game, Rapid Exhaust.

Just remember:

Lima built 'em in 'forty-three . . .
Now we wheel 'em down Espee.
Rapid exhaust! Hear the "varnish" roar!
Big steam hog! Big four-eight-four!

Optional routes

For the benefit of those who must travel but who cannot get accommodations by their usual route, TRAINS each month prints a brief listing and survey of available routes between larger cities.

Cincinnati and St. Louis:

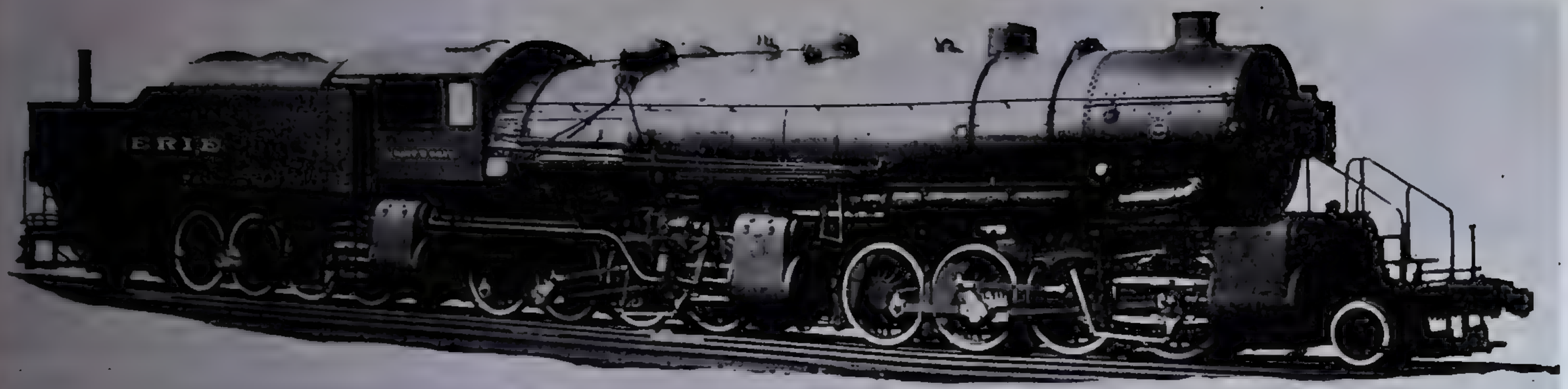
Baltimore & Ohio: 2 day trains each way, 1 overnight train with sleepers.

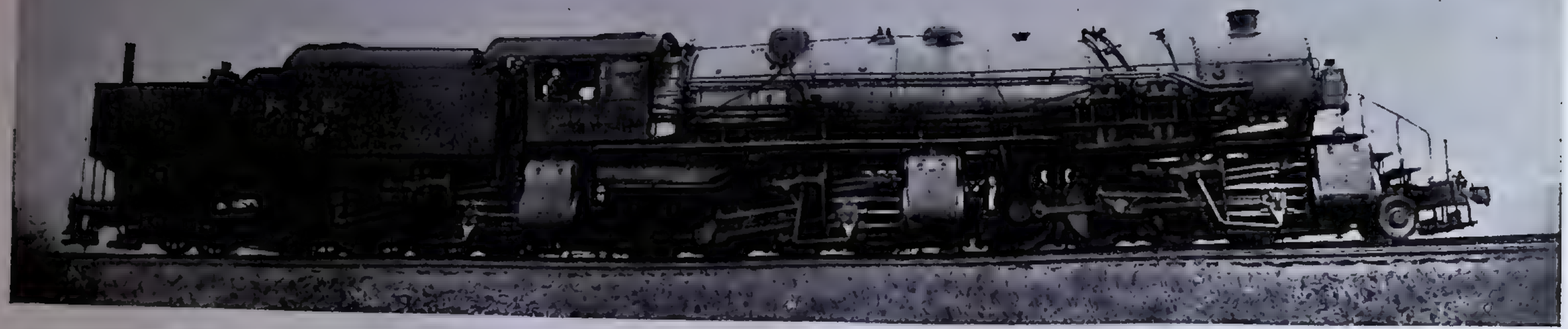
Louisville & Nashville: Overnight service both ways, with sleeper from Louisville to St. Louis, major portion of trip. One-day service eastward only. Change at Louisville.

New York Central: 2 day trains each way, 2 overnight trains with sleepers. Through cars via Indianapolis.

Pennsylvania Railroad: Daytime and overnight service with change at Richmond, Ind.

Southern: The Southern does not schedule Cincinnati - St. Louis service, but an interesting and scenic roundabout route, taking longer, is Southern main line south from Cincinnati to Danville, overnight stopover, and then the all-day train from Danville through Louisville to St. Louis. Same stopover in opposite direction.





Top, the original Class P-1; bottom, with changes.

Erie Triplex Locomotives

The most spectacular steam locomotives ever built were three Matt Shay type articulated compounds designed especially for pusher service on the Erie's Susquehanna grade and built by Baldwin in 1914 and 1916. These locomotives had three pairs of cylinders, those under the cab operating driving wheels under the tender. The center pair of cylinders took feet, although they exert only 135,375 pounds starting tractive effort. But they reflect the modern view that it's more important to keep a train moving at high speed than to merely start a huge train and then crawl along with it. Matt Shay speed with the 250-car train was 13½ miles an hour. The UP jobs generate maximum horsepower at 70 m. p. h.

In practice the Matt Shays, which were numbered 5014, 5015, and 5016, seldom found a cent of the weight was available for adhesion.

For their time the Matt Shays were remarkably successful. The first one was built in 1914 and after demonstrating its worth two more were built in 1916. Each took the place of three ordinary locomotives used as pushers. With the more powerful locomotives used to maintain fast freight schedules today, the 1½ per cent Susquehanna grade isn't such a problem and locomotives like the triplex articulateds will probably never again be built

high-pressure steam directly from the boiler, and the right cylinder exhausted into a receiver which supplied the front pair of low-pressure cylinders, while the left exhausted into a receiver which supplied the rear pair of low-pressure cylinders. Because of this arrangement all cylinders were the same size. Ordinary Mallet (compound articulated) locomotives have low-pressure cylinders of larger diameter than the high-pressure cylinders. The front cylinders of the Matt Shay locomotives exhausted into the stack, creating the draft, while the exhaust from the rear cylinders went through a feedwater heater and then into the air through the stack on the rear of the tender.

The theoretical tractive effort of these locomotives was 160,000 pounds, greatest of any steam locomotives ever built with the exception of the Virginian's 2-10-10-2's, which regularly rate at 147,200 pounds but can also be operated as simple articulateds with 176,600 pounds tractive effort. If the Matt Shays had been equipped with valves for simple operation they could have developed well over 200,000 pounds' pull! As it was they had the oomph, theoretically, to move a train of 640 50-ton cars—a train nearly five miles long. In one test run a 250-car train of 16,025 tons was pulled.

For all this tractive effort, the engines became out of date and were dismantled in 1929, 1930, and 1933. In spite of the pull they could exert, these were slow, ponderous machines. A clue to the horsepower capabilities is the grate area of 90 square feet, about the same as many modern 4-8-4's. The Union Pacific's recent 4-8-8-4's have grates of 150 square

chance to push their hardest. On Susquehanna Hill one of them developed 140,000 pounds push through a dynamometer car. It was, of course, the use of tender weight for adhesion which helped give these engines their tremendous drawbar pull. Even though the tender load was variable, the pusher service offered frequent opportunities for watering and fueling, and under full load almost 90 per

Principal Dimensions:

Road classification	P-1
Road numbers	5014-16
Date built	1914-16
Tractive effort, pounds	160,000
Cylinder diameter and stroke, inches	36 x 32
Driver diameter, inches	63
Weight on drivers, pounds	766,300
Weight of engine and tender, pounds	860,400
Steam pressure, pounds	210
Grate area, square feet	90
Evaporative heating surface, square feet	6851
Tender capacity: Gallons of water	11,600
Tons of coal	16

All photos courtesy Erie RR.

Trains Have Personalities

BY ROY CLARK

Some trains are pretentious, some are glamorous; others are as comfortable as an old shoe

PASSENGER trains, like people, have distinct personalities and characteristics. Some trains remind me of the pompous Big Business Man, complete with hard hat, beribboned eye glasses and pearl gray spats. Others have a highty-tighty air and are, figuratively, wearing a lorgnette. In still others prevails a subtle atmosphere of gracious living and gentle breeding. Then there are trains with a free and easy air that says, "We're out for a good time." And, lastly, there are trains, beloved to all of us, that are as homey and comfortable as your own living room—the sort of trains where you exclaim, "I'm going to like this!" the minute you get aboard.

What I'm going to say about train personalities refers, of course, to the prewar period when our trains were operated normally, and when it was possible to take the time to do things that made one train different from another. Right now, most railroads have necessarily curtailed some of their services and appointments, but these are only temporary retrenchments, and even today the different characters of trains are still discernible.

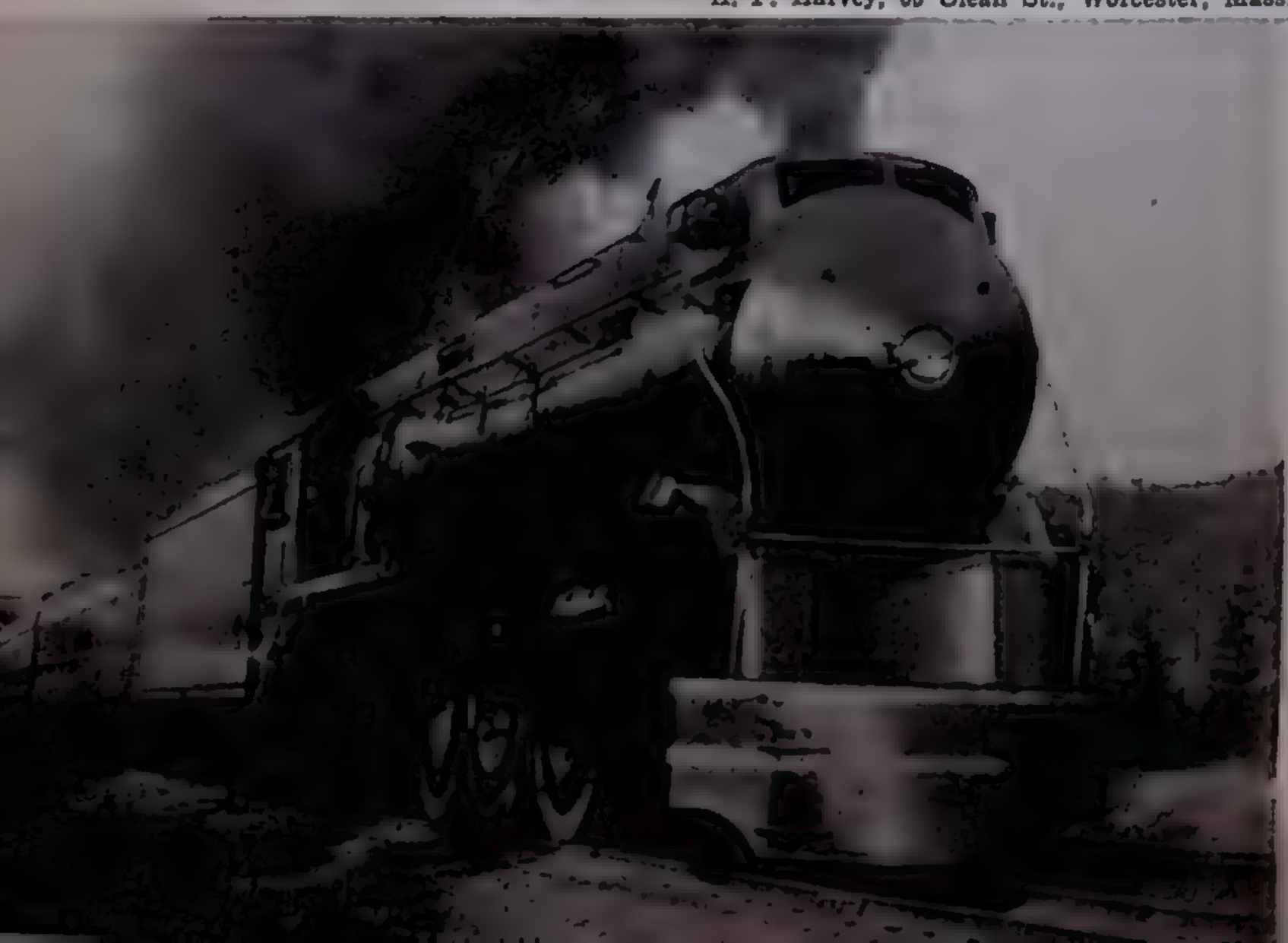
I always think of certain trains as being Big Business carriers. Whenever I board the New Haven's *Merchants Limited* I know that I'm on one of them. The all-Pullman consist, with the long string of parlor cars, the extra fare and the after-the-market departure from either New York or Boston, all testify to the fact that the people who travel on it are important and must be carefully catered to. The people you see on the *Merchants Limited* are, indeed, quite different from the usual run of passengers. The man next to me is reading the *Wall Street Journal.* Up at the table forward three men are earnestly discussing some typed report and it makes me feel vicariously important to imagine that they are going over the not-yet-printed annual report of the Worldwide Oil Company or of the Colossus Bank & Trust Corporation. On no other train in America, to my knowledge, would it be possible for a passenger to nonchalantly screw a monocle into his eye without causing comment, if not considerable commotion, or for another passenger, sporting pink whiskers, to wear lovely gray silk gloves while thumbing through a magazine. But I've seen both of these phenomena on the *Merchants,* although, fortunately, not on the same trip.

The Pennsylvania has a large fleet of Big Business trains between Washington and New York, with bankers and brokers and senators a dime a dozen, but the atmosphere has always seemed just a bit more austere on the *Congressional Limited,* whose severe elegance reminds one of an exclusive club.

New Haven's *Senator,* operating between Washington and Boston, always makes me feel important when I ride on it, too. My wavering morale gets a tremendous lift when we tarry only 15 minutes in New York City. Why, that's not as long as some of the Milwaukee Road trains stop at Sioux City, Ia! We on the *Senator* must,

The Merchants Limited, New York - Boston on the New Haven.

H. F. Harvey, 65 Olean St., Worcester, Mass.



Vernon Seaver, Railroad Photographic Club, 47 Royal St., Allston, Mass.

The Twentieth Century of the New York Central at Englewood, Chicago.

indeed, be somebodies to give New York the brush-off like that!

Two other trains are included in my catalogue of Big Business Trains. The first is the Michigan Central's *Twilight Limited,* between Chicago and Detroit, another late afternoon departure. I'm positive that the man sitting next to me must be the president of the Gigantic Motor Car Company, or at least the vice-president in charge of production. And that other man across the aisle is, without doubt, the head of Chicago's biggest bank, going over to Detroit to arrange a fifty-million-dollar deal for some automobile manufacturer. The fact that the Michigan Central routes its *Twilight* into the LaSalle Street Station, on Chicago's Loop adjacent to the financial section, seems to indicate that some people who ride this train must be pretty important. Pennsy's *Detroit Arrow* completes my list of Big Business trains.

There's another group of trains that I call the Important People trains—those that are favored by the movie stars, actors, writers, composers and the other celebrities. The New York Central's *Twentieth Century* and the Pennsylvania's *Broadway Limited* are tops in this category. Both are made up entirely of room cars, and a bit of refreshment in the club car before din-

The Super Chief, Chicago - Los Angeles on the Santa Fe.

Santa Fe.

W. M. Bryan, Durham, N. C.

The George Washington (above), Washington and Norfolk - Cincinnati on the Chesapeake & Ohio. Below, the Pan American, Cincinnati - New Orleans on the Louisville & Nashville.

Joseph P. Sadler, 1723 S. Court St., Montgomery, Ala.

ner costs what you'd pay for a full meal at the All-American Cafe in Waterloo, Ia. However, the whole atmosphere of either train is so charged with glittering wealth that the price cannot be considered at all out of line.

The Santa Fe's *Super Chief* is in the same class, too. Streamlined like a whippet and gleaming like a meteor, it exudes class from every window. And do you get a lift when the steward greets you by name at breakfast the first morning out! Your dash to the West Coast is like a short deluxe ship cruise. But don't ask about that lovely blonde vision in Compartment E. It's more fun to imagine that she's a Hollywood Glamour Girl than to learn that she's a high-voltage cosmetics saleslady.

The *Lark*, on the Southern Pacific, is a swank way to go from Los Angeles to San Francisco. I happened to be a passenger the first week the new streamlined edition was put into service, before the wartime hustle and bustle had worn a bit of the shine off, and she was something to see. And so were the people who filled her many private rooms. Folks whose names are on every movie screen, as well as other folks who say that 25 years hence they will make the West Coast more important than the Atlantic Coast.

Some trains belong in what I call the Gracious Living group. Their appointments are no better than the deluxe trains of other roads and, in some instances, are not as modern nor as complete. But these trains have something that money cannot buy. Compared with them, such glitteringly modernistic trains as the *Super Chief* and the *Lark* seem just a bit on the "new rich" side.

To me, the flagship of this group is the C&O's *George Washington* from Cincinnati to Washington and Virginia points. One senses the atmosphere of Old Virginia at once, with all the graciousness and niceties of living associated with it. The colonial dining car, with its draped windows and the tasteful reproductions of paintings by Stuart and others, adds greatly to the general effect. You actually feel that you are retreading the path that George Washington

The Twilight Limited, Chicago - Detroit on the Michigan Central.

D. W. Yungmeyer, 5116 Dorchester Ave., Chicago, Ill.

opened from Virginia to the west.

The B&O, too, has some of this atmosphere on its *Capitol* and *National Limiteds.* Even in these rushed times the dining car stewards and waiters recognize that food enjoyed in cheerful surroundings is practically pre-digested. The train crews keep alive the old railroad tradition that the passengers are their guests, and many a courtly, white haired B&O conductor would be at home at the most exclusive diplomatic reception. This line's atmosphere of genuine hospitality and graciousness has often brought them customers who might otherwise have used shorter competing lines.

Another train in this category is the *Pan-American* on the L&N from Cincinnati to New Orleans. Until the tremendous pressure of carrying and feeding thousands of troops necessarily curtailed the service a bit, the meals on the L&N were something always anticipated with gusto. In prewar times, a meal on the *Pan-American's* diner represented the epitome of the best in Southern cooking. I shall never forget the time I complimented the waiter on the excellence of the hot biscuits and chicken gravy. He said that he would continue to bring them on as long as I could eat them, and he did. Those days are gone right now—but not forever I'm sure.

Missouri Pacific.

The Sunshine Special (above), St. Louis - Mexico City train of the Missouri Pacific; below is the B&O's New York - Chicago Capitol Limited before streamlining.

TRAINS collection; by R. L. Carlson.

I must not forget to include the Katy's *Texas Special* in this Gracious Living class, if for one thing alone: they used to have a bowl of big red apples on the lounge car table every evening, and you ate a delicious apple with the Katy's compliments before you went to bed. A little thing, but big enough for me to remember after six or eight years.

One group of trains I try to stay away from are the Resort and Vacation trains. I don't stay away because I disapprove in any way of vacations, nor of the trains that carry vacationists, but because it always makes me miserable to be working while others are playing. It's remarkable how different the same journey can be, depending on whether you're on vacation, or business.

Seaboard's New York - Florida Orange Blossom Special.

E. B. Holton, 60 Elmwood Ter., Irvington, N. J.

R. J. Foster, P. O. Box 375, East St. Louis, Ill.

The Lone Star, Memphis - Dallas on the Cotton Belt.

In normal times the Resort and Vacation group was lead by the New York to Florida fleet of trains. The younger crowd in the money—actors, radio folks, writers, playwrights, columnists and brokers—liked to use the Atlantic Coast Line's *Florida Special.* With its orchestra, recreation car, hostess, club car and bar it was a veritable first-class night club on wheels. The more sedate travelers patronized the Seaboard's *Orange Blossom Special,* with its unique atmosphere of a high-class hotel, or they rode on many of the other trains available during the busy winter season.

The 10-day vacation crowd — the stenographers, clerks, department store help and those in the suit and cloak industry—used to make a carnival of the Coast Line's *Champion* and the Seaboard's *Silver Meteor.* At that time neither train carried sleeping cars, and certainly none were needed. "What if we do stay up all night tonight? We can sleep all day tomorrow when we get there." Youth having its 10-day fling.

The North Western and the Milwaukee operate some fine fishing trains out of Chicago to the North Woods of Wisconsin and Northern Michigan. Every time I happen to be on one of them, the general air of good fellowship, the thought of sportsmen getting together to have a bit of wholesome fun in the outdoors, is so potent that I have to fight to keep from throw-

The Florida Special, prewar New York - Florida all-Pullman train of Atlantic Coast Line.

ing my business out of the window and joining them. A happy, anticipatory crowd, with the car full of fishing rods, reels, creels, waders and all the other paraphernalia an earnest devotee of Isaac Walton carries with him.

The North Western and the Milwaukee also have many shorter runs to nearby Illinois and Wisconsin resorts. We used to call the North Western's Saturday afternoon train to Lake Geneva the *Millionaires' Special,* because it was made up entirely of parlor and dining cars. It was something to see when it streaked by, powered by one of the North Western's high stepping Atlantics — a type, incidentally, that still renders very fast service on a few light trains between Chicago and Milwaukee.

R. V. Nixon, Box 101, Livingston, Mont.

North Coast Limited, Chicago - Seattle, Northern Pacific.

The wholly typical Tourist Travel train, to me, is the Southern Pacific's *Sunset Limited,* amiably and leisurely ambling over the long trail from New Orleans to Los Angeges. (It used to continue on to San Francisco, but not now during the war.) The journey takes a lot of hours, and the average prewar speed, based on elapsed time, was less than 40 miles an hour. Passengers, just out for the ride, crowded the station platforms at San Antonio, El Paso, Tucson, Phoenix and Yuma, taking full advantage of the 30-minute service stops at these points. At Yuma they bought blankets and bracelets from the Indians squatting on the station platform. That is, they bought them if they had not already spent their full budget on such doo-dads from the special train butcher, who got on at El Paso and worked the entire train assiduously all day.

The Rio Grande's *Scenic Limited,* through the Royal Gorge, was much favored by the lady school teachers, who ecstatically transformed geography book pictures to actual realities. They crowded the narrow platform at the Gorge, awed by the towering perpendicular cliffs with the highway bridge thousands of feet above, and tried to understand about the railroad's hanging bridge, made necessary because there wasn't room for conventional bridge foundations.

A few years before this war the Missouri Pacific's *Sunshine Special,* with through Pullmans from St. Louis to Mexico City, was fast becoming a popular tourist train, but in a more sophisticated and international way. The prosperous Mexican business man, with his pretty wife and bright children in the compartment, the Aztec design of the unusual lounge car, all built up the feeling that you were going into a foreign country. Right now the *Sunshine* is busy carrying business and military men and diplomats to our ally south of the border.

The *Empire Builder* and the *North Coast Limited,* operated by the Great Northern and the Northern Pacific respectively, have always been popular tourist trains. I used to get a kick out of the harmless little subterfuge played on the passengers by the Burlington, which takes both trains out of Chicago. The two trains used to be lined up side-by-side in the Chicago Union station. One left about 15 minutes ahead of the other, but the first one waited at Western Avenue for the second train, and there they were put together, end-to-end, for the night's run to St. Paul. The timetable even

Scenic Limited, Denver - Ogden, D&RGW.

R. H. Kindig.

R. V. Nixon.

Milwaukee Road's Hiawatha leaving St. Paul for Chicago.

showed one half making a conditional stop at East Dubuque while the other half made a regular stop! Just outside of the St. Paul station the combined train was again cut apart and taken into the station as two trains. They can't do that today, because one section of either train is about all that one of the Burlington's big Hudsons can handle.

Then, lastly, we all know of some trains that don't claim to be pretentious, although they're homey and comfortable in a livable way, like your favorite chair at home. Some of these trains are fast, while others are more leisurely, but they all have one common factor: they have an informal atmosphere.

The Frisco's *Meteor,* between St. Louis and Oklahoma points, is a fine example. Its equipment and appointments are of the best and it's no sluggard as to speed. It derives atmosphere from the people who ride on it: the sun-bronzed cattle- and oil-men, with wide and expensive Stetson hats, and some of them with cowboy boots under their trousers. Informal men, whose talk and attitude belie the fact that they could buy out a whole trainload of Easterners in hard hats and spats.

The Cotton Belt's overnight *Lone Star,* from Memphis to Dallas, also has this atmosphere to a heart warming degree. Here prosperous, long-fiber-cotton men from the Mississippi Delta country mingle with oil and cattle men from Texas.

In an entirely different section of the country, the Milwaukee Road has such a train, the *Arrow,* operating from Sioux Falls to Chicago. Here rich dirt farmers and western cattle men take their families to the "big city" for a fling at the shows and night clubs. The Milwaukee's cheerful orange-colored cars and their old-fashioned but roomy and comfortable club cars blend perfectly into the picture.

Yes, trains do have personalities, and very pronounced ones, personalities so deeply embedded into their fiber that even the wear and tear of an all-out war cannot completely eradicate them. Personalities so distinct that when you board this train or that you feel you're seeing an old friend again. And when you leave, at the end of your journey, you say to yourself, "I'll be seeing you again soon, I hope."

Statement of Ownership

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933.
Of Trains, published monthly at Milwaukee, Wis., for Oct. 1, 1946.

State of Wisconsin, County of Milwaukee, ss.

Before me, a notary public in and for the state and county aforesaid, personally appeared A. C. Kalmbach, who, having been duly sworn according to law, deposes and says that he is the editor of Trains and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the [redacted] and addresses of the publisher, editor, managing editor, and business manager are: Publisher, Kalmbach Publishing Co., 1027 N. 7th St., Milwaukee 3, Wis.; Editor, A. C. Kalmbach, 4621 W. Woodlawn Ct., Milwaukee, Wis.; Managing Editor, W. V. Anderson, R. 3, Box 361, Waukesha, Wis.; Business Manager, H. H. Kirtland, P. O. Box 215, Pewaukee, Wis.

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3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

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A. C. Kalmbach, Editor

Sworn to and subscribed before me this 30rd day of September 1946.

Martha Leger, Notary Public
(My commission expires Sept. 16, 1947.)

[SEAL]

Case History

With which Attorney Louis F. Meyer Jr. illustrates important railroad legal point

In the Blue Ridge Mountains of Virginia,
On the Trail of the Lonesome Pine,
Lived a sweet brown cow with eyes so fine;
But you can't expect a cow to read a railroad sign!

. . . . . .

Now her horns are in the mountains of Virginia,
And her tail's on the lonesome spine.

—*Cowper.*

WHOM shall we charge with this tragedy: the dairyman who did not fence Bossie in, or the railroad which didn't fence her out?

The earliest days of steam operation gave rise to our problem; in fact, we espy one Burton loading his musket in 1834 to deal explosive mercy to an "elegant milch cow" which had survived a shattering joust with the Stephenson-built *Herald* of the Baltimore & Susquehanna Rail Road. We also see him promptly expressing his bereavement before the local justice of the peace. Brother Burton testified that his lost treasure had scarce blossomed from vestal heiferhood and had expectancy of long life and much butterfat, until her public-spirited career had been abruptly terminated. He claimed that it was the duty of the proprietors of such a menace as steam cars to protect innocent beasts from likely maceration.

Luminus counsel for the company pointed out that Farmer B. well knew "brigades of cars" were likely to precipitate bovine tragedy if cattle were permitted to roam the tracks. If animals haven't the mental amperage to recognize danger, their owners are obliged to do their beasts' thinking, he argued. And, he charged, the late cream-foundry had been only a walking boneyard, far down the converging canyon of age — a worthless pensioner.

The bucolic squire considered well his tobacco and his short term of office. He was impregnated with the familiar juices of "soak the rich." Verdict for Burton: $30.

Upon appeal to the big court at the county seat, the B&S overmatched our country cousin. Here the law-trained judge, secure in a 15-year dynasty, opined that there was no proof that the loss of the cow resulted from improper management of the locomotive-engine, nor that the fenceless and defenseless son of toil had not himself been negligent in failing to restrain his stock. Verdict for B&S.

In no time at all this matter was in the hands of the county Agricultural, Horse-Fair and Cock-fighting Society, which regarded all decisions favoring nonfarmers as grave miscarriages of justice, contrary to the order of Nature and utterly wanton. An irate and urgent "pressure group" waited upon the county delegates to the legislature. The heat was on.

The spoor of this steam roller is plainly imprinted in the Acts of 1838. "Rail Road Companies shall be responsible for injuries resulting in death or otherwise, inflicted upon any stock, cattle, horses, sheep, hogs and so forth . . . upon any of their Roads or Branches thereof, unless the said Companies can prove to the satisfaction of the justice or other tribunal before which the suit may be tried that the injury complained of was committed without any negligence on the part of the Company or its agents. . . ." This enactment, which shifts the burden of proof so that the company is presumed guilty until it can prove itself innocent, is repugnant law, but its mates are to be found in the statutes of nearly every state today.

Courts have drawn the teeth of these acts in many jurisdictions and have narrowed their application by constipated interpretation, as befits their origin in cupidity. Not that railroad claim agents have not waxed as shrewd as lightning-rod salesmen in the process! Latterly, though, when a farmer get paid for such livestock loss, it is usually because the retention of public goodwill and the costs of defending suits render "nuisance value" payments expedient.

Typical of intrigues under such laws is the case of the Scaggs, who sought to collect the values of Negro slaves on the theory that they, too, were livestock! The high courts turned them down flat.

No rationalizations apply to the "itinerant workman" who pillows his alcohol-clouded noggin on a No. 14 switch frog and gets his hair parted down to his umbilicus by an impersonally insistent leading truck. He is held to the natural and probable consequences of his voluntary acts, and we do not inquire whether he erred more in getting stewed to the gills or in assuming a position of peril.

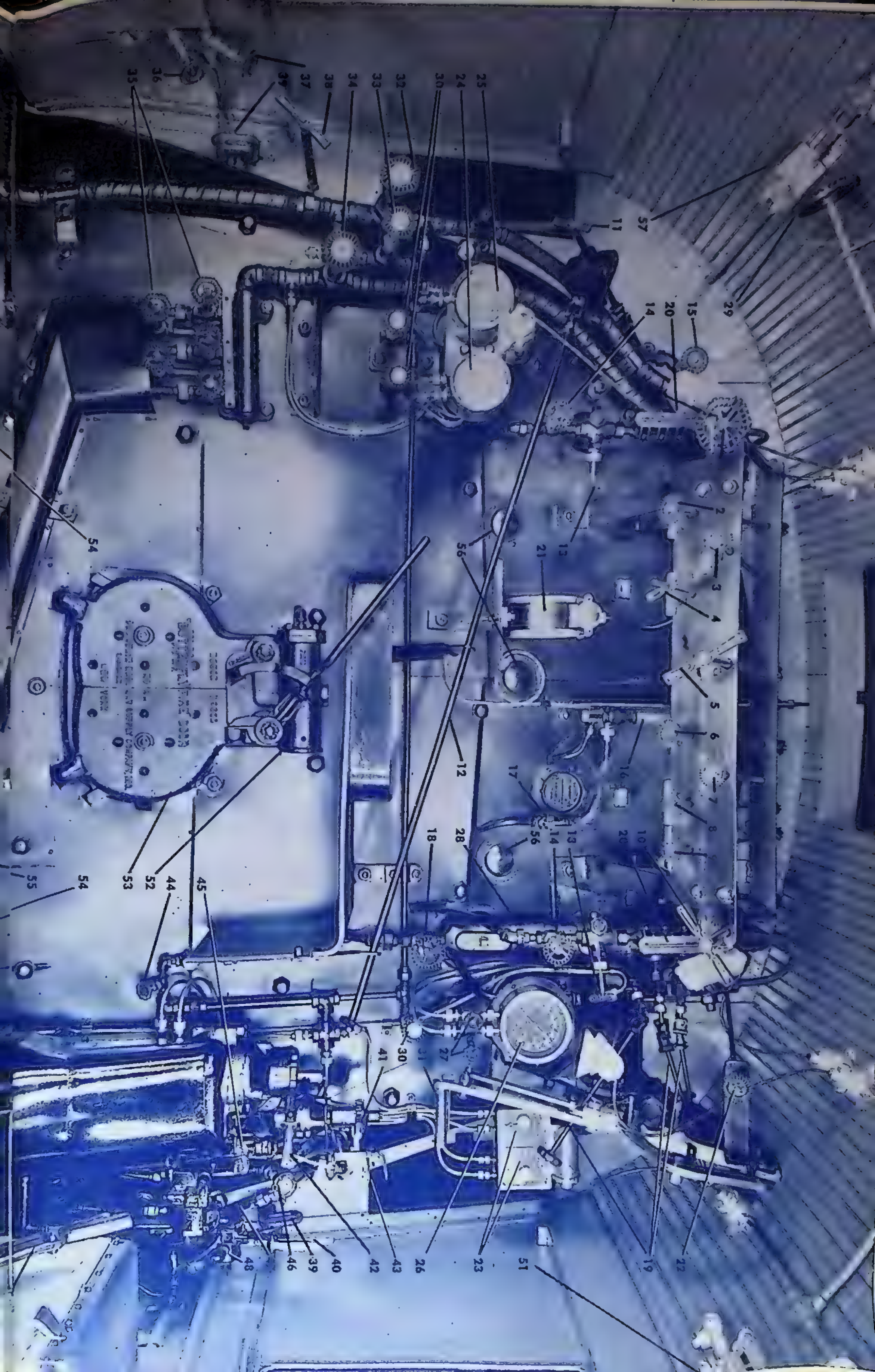
Nor do legal benefits accrue to the gas-buggy gaucho who departs this life in the tinny tatters of the joy-wagon he so confidently intruded on a grade crossing. The mere presence of rails is in itself a most eloquent warning of danger, and if the motorist appears on the tracks too late for the train to halt, his heirs, executors and administrators mourn him with prospects as empty as pockets.

He who pre-empts the rails, be he man or beast, is pushing Providence a smidgen farther than will the law.

« Exclusive railroad right of way is the private property of the company upon which persons and beasts trespass in peril of injury and prosecution. The carrier owes to the trespasser only the negative duty of reasonable care to avoid injury after he is discovered in danger. If, upon warning by whistle and bell, the traverser persists, then the railway is charged with due precaution to avert accident. To persons trapped in the path of trains there is the obligation to render prudent assistance.

The general public may cross or use the right of way only at recognized crossings or in shared public streets. States and municipalities may require, as valid exercise of police power, the inauguration of warning signals, crossing gates or watchman service at dangerous crossings at grade. Should these means fail, one who is injured by reason of the false security he derives from the absence of warning is entitled to compensation.

To a patron the company owes the greater duty of restricting him to areas of safety and removing probable causes of injury in these areas. When a patron transgresses bounds, he does so at the risk of being held to be trespassing.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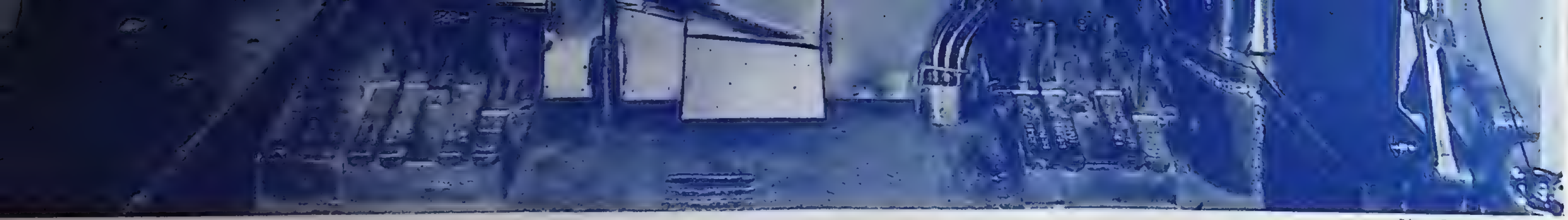


Lima Locomotive Works

The Controls in the Cab

In its essence the steam locomotive is a remarkably simple piece of machinery. Simple and rugged. Put almost any kind of fuel in the fire box, almost any kind of water in the boiler, and it will go. But to bring the locomotive to its present efficiency, much more than simple controls are necessary in the cab, and the correct operation of a steam locomotive so as to get the most out of it has become a job in which the engineer is assisted by dozens of accessories.

The locomotive backhead once sported only a throttle to make her go, a brake to stop her, a reverse lever to control the valve cutoff, an injector to put water in the boiler, a glass and cocks to see that there was plenty over the crown sheet, a whistle, mostly to call for brakes, and of course a steam gauge to see that there was enough of what it still takes. But now look! The photo shows the backhead of an Alleghany-type locomotive recently built for the Chesapeake & Ohio by Lima Locomotive Works.

The essentials are still the same, but even they look different. Instead of the slanting throttle lever acting on a throttle valve inside the boiler, most locomotives now have the front-end throttle with the type of lever shown in the photo (No. 31). And the old back-breaking Johnson bar reverse lever has been replaced by the neat little quadrant (No. 40) which actuates the power reverse gear. The steam brake valve of early days has evolved through the original air brake into the modern complexity of brake valves (Nos. 41 and 42) which can effectively control the immense momentum of a 10,000-ton coal train on downgrade.

It's a big machine, this steam locomotive, and marvelously complex. It has a power which can seldom be sensed by those who watch at the side of the tracks. And yet it is all controlled with finesse by the men in the cab.

KEY

1. Feedwater heater pump steam turret valve.
2. Stoker engine steam turret valve.
3. Stoker jet steam turret valve.
4. Water gauge top valve, left side.
5. Cab turret shut-off valve.
6. Turbo-generator steam turret valve.
7. Cab heater steam turret valve.
8. Front lubricator heater steam turret valve.
9. Back lubricator heater steam turret valve.
10. Injector steam turret valve.
11. Feedwater heater pump steam throttle valve rod to fireman.
12. Feedwater heater pump steam throttle valve rod to engineer.
13. Water gauge bottom valve.
14. Water gauge drain valve.
15. Feedwater heater pump steam suction heater valve.
16. Low water alarm whistle.
17. Low water alarm test valve.
18. Water column drain valve.
19. Gauge cock extension rods.
20. Reflex water gauge.
21. Double-dial steam gauge.
22. Water gauge top valve, right side.
23. Quadruplex air gauge.
24. Stoker steam gauge.
25. Feedwater heater pump steam gauge.
26. Steam chest and back pressure gauge.
27. Back pressure and steam chest pressure gauge needle valve.
28. Water column.
29. Ventilator operating rod handle.
30. Tunnel mask air valves.
31. Throttle lever.
32. Stoker engine booster steam valve.
33. Stoker engine throttle steam valve.
34. Stoker jet main steam valve.
35. Stoker jet individual steam valves.
36. Brakeman's cab heater steam valve.
37. Fireman's cab heater steam valve.
38. Blower steam throttle valve.
39. Blow-off cock operating handle.
40. Reverse gear quadrant.
41. Independent brake valve.
42. Automatic brake valve.
43. Whistle operating valve.
44. Firedoor needle valve.
45. Rail-washer valve.
46. Bell-ringer valve.
47. Sander operating valve.
48. Cylinder cock operating valve.
49. Injector operating lever.
50. Injector overflow valve.
51. Headlight switch.
52. Firedoor operating cylinder.
53. Firedoor.
54. Grate shaker levers.
55. Drain pipes for water gauge, column and cocks.
56. Washout plug casings.
57. Fuse box.

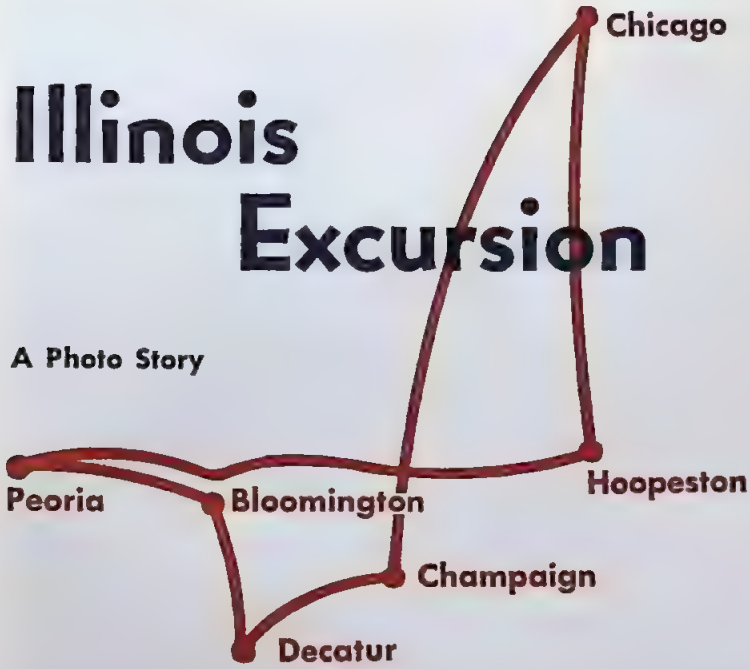
Paul Ellenberger, 8119 Princeton Ave., Chicago, Ill.

Trip starts at 8:30 a. m. at Dearborn Station in Chicago, owned by Chicago & Western Indiana and used by Santa Fe, C&EI, Wabash, Monon, Grand Trunk, and Erie. The early arrival may see trains and equipment of all these roads as well as one of the little-known suburban trains of C&WI (above photo). First lap of the excursion is on C&EI's No. 1, day local, which looks much like the Zipper, shown below leaving Chicago. This train is used as far as Hoopeston, junction with the Nickel Plate, where we arrive at 11:30 a. m.

C. G. Gibbs, 6547 Union Ave., Chicago, Ill.

Illinois Excursion

A Photo Story



RIGHT now we can't go train-riding just for the fun of it. But we can dream, can't we? So TRAINS takes you, with photos, on a typical two-day excursion such as you will be making when Victory comes.

The route is from Chicago to Peoria and return, with an overnight stop at Peoria, where good hotel facilities are available. Three steam railroads and one electric railroad are used, and many more can be seen along the way, especially at Peoria (see "Peoria Gateway," July TRAINS) and at Decatur, where a wait between trains allows plenty of time to see the Wabash main line.

Our C&EI No. 1 leaves Chicago just half an hour behind the every-third-day Florida streamliner Dixie Flagler (below). If we start our trip at Englewood Station instead of in downtown Chicago we can be at the station early and see the Flagler, the Erie Limited, and other interesting trains to good advantage. This station should not be confused with the Englewood Union Station used by NYC, Rock Island and Pennsylvania. At Hoopeston we see the Dixie Express and Dixie Limited northbound, 12:11 and 12:21 p. m.

Chicago & Eastern Illinois.

Dave Lewis, 509 Kellogg St., Peoria 5, Ill.

From Hoopeston we will ride Nickel Plate No. 21 to Peoria, leaving at 1:43 p. m. and arriving in Peoria at 5:15. Both C&EI and Nickel Plate use the same station in Hoopeston, a city of 5400, so after watching the Dixies through we have plenty of time for lunch in Jim Conken's restaurant. We may see a Nickel Plate freight, although after Victory an oil block like the one above at coaling station near Bloomington will be a rare item indeed.

George Krambles, Central Electric Railfans' Association, 1240 Edison Building, Chicago, Ill.

Don Burkhardt, 718 Owen St., Lafayette, Ind.

On arrival in Peoria we check in quickly at the Jefferson or the Pere Marquette and get out to see the Illinois Terminal bridge (below, opposite page) and other railroad sights. Next morning (unless we have a through ticket for the entire circuit) we buy a ticket to Champaign on the Illinois Terminal and leave at 7:15. From 9:48 a. m. to 2:03 p. m. we lay over between trains at Decatur, giving plenty of time to see Wabash sights (above). Then into Champaign at 3:28 and out again at 5:56 on the Illinois Central's Creole, which takes us into Central Station, Chicago (below) at 9:25 p. m.

Robert McKell, 187 W. Second St., Chillicothe, O.

Newfoundland's Narrow-Gauge

BY FRED D. MOSHER

540-mile run may take 27 hours or 27 days, but the Overland Express always gets through

In the winter of 1941 an American soldier climbed off the *Overland Express* at St. John's, Newfoundland, and stated that he had just completed the most congenial train ride he had ever taken, but that he thought the *City of Denver* had a slight edge on the train for speed. In winter the cross-country passenger trains on the narrow-gauge Newfoundland Railway may take from 27 hours to 27 days to make the 540-mile run from Port-aux-Basques, on the Gulf of St. Lawrence, to St. John's, the eastern terminal. The 27 hours is timetable running.

The railroad in Newfoundland is a part of the country and of the people; it is owned and operated by the government, and the 3600 men and women who run it are as much a part of it as the water chutes and locomotives. When you ride on the Newfoundland Railway you do not ride on a "system"; you are transported on what might be called an institutional part of a rugged country inhabited by rugged people who are also philosophical about most things. Had the American soldier complained about his time-consuming ride he might have been told that there was nothing to be in a hurry about; Newfoundlanders themselves are never in much of a hurry, so they reason that the trains might as well take their time also.

But Canadian and American railroad men who have traveled on the Newfoundland road are amazed at the job it does. With 11 Moguls, 2 Consolidations, 14 Pacifics, and 21 Mikados, the line handled 223,000 passengers in 1941 and increased this to 415,000 in 1942 and 500,000 in 1943. The annual freight haul is more than a million tons. To do this job the 35 mainline engines run two million miles yearly, with some of the Mikados doing close to 10,000 miles a month. The "Mikes" handle most of the passenger traffic and double in freight service; light passenger trains are handled by the Pacifics, which also handle light freight trains. The locomotives are all hand-fired, the heaviest unit being 150,000 pounds, and a trip of 24 hours is common for engine and train crews. Engines other than the Pacifics and Mikados are kept in branch-line service.

The island of Newfoundland, England's oldest colony, lies in the Gulf of St. Lawrence, which washes its northwest coast. It is triangular in shape and its southern coast, facing the Grand Banks, parallels the peacetime steamer lanes to Europe. The apex of the triangle falls near Labrador at the Strait of Belle Isle; the northeast coast line faces Greenland and runs in a crooked line, with many indentations, from Labrador to St. John's, the capital. When the railroad was first suggested in the 1840's it was the idea that the line would run along the southern coast and act as a rail link for the passenger traffic between North America and Europe.

Today the rails run a winding course in a general northwestern direction for 400 miles to the Gulf of St. Lawrence; there they turn southwest for 140 miles to stop at Port-aux-Basques, where ship communications are maintained with Canada across the Cabot Strait, the outlet of the gulf to the Atlantic Ocean. A story is told to the effect that when the road was originally surveyed and laid out, the contractor by-passed all trees, stumps, and boulders to increase his mileage. Mainline grades run to 2.5 per cent and the road has some 10-degree curves. The line does not use pusher service but often doubleheads the heavier trains. A ride over the 70-pound mainline rails is something to be remembered.

Every element of nature contrives to keep the trains either snowbound, tied up by washouts, or literally chained to the rails riding out raging gales. One cross-country passenger train was stalled for 17 days during the 1941 winter; in 1942, food was dropped by parachute to passengers on an eastbound passenger train after it had been stalled for days in a blizzard.

But the Newfoundland line is equipped to battle the elements and is manned by men who have "cut their eye-teeth" in blizzards of hurricane intensity at temperatures which drive everybody but the railroaders indoors. Once, when a freight train became stalled in a blizzard, it was "lost" for over a week; the telegraph lines crashed in the gale and the train

was snowed in. The engineer and fireman pulled the fire, drained lines that might freeze, and crawled into the fire box to keep themselves from freezing. Each time the boiler began to cool to the danger point a fresh fire was started to warm it up; the fire would then be pulled and the performance repeated. Several days later, as the storm abated, a rescuing train reached them and found the freight with full steam up and all hands accounted for.

During a windstorm in 1943 the caboose of a freight train which was "laying to" on the main line a few miles from the western terminus was blown off the rails and carried many feet from the right of way.

Every day from early spring to early winter, a train leaves St. John's westbound and another leaves Port-aux-Basques eastbound. Constituting about 10 to 12 cars of 40 tons maximum weight, the trains carry baggage and mail cars, second-class cars with wooden seats, coaches or first-class cars, diners, and sleepers. Train tonnage runs from 250 to 350. On every second day the trains arriving at and leaving Port-aux-Basques connect with the ship from Canada; on other days they handle only local traffic. This

Shown above is Corner Brook as it appeared in 1914, and (opposite page

arrangement has been varied so that trains run about three times per week in each direction and in two sections with one section carrying "foreign" traffic and the other section handling local passengers. In 1942 the trains were running in two sections, one all sleeping cars and the other all first- and second-class, with both handling baggage and mail. In 1943 this was changed to every-day service and single-section trains.

When winter comes, the cross-country service is cut to two trains per week in each direction. Coal and food reserves are located at strategic points along the main line. Three rotary snowplows complete with crews are kept ready for service at all times; frequently the rotaries precede the passenger trains over the worst stretches of road.

Freight trains run to not much over 1000 tons trailing load. They are not scheduled and often take days to complete a division of 135 miles. At times the engine crew gets exhausted and the train is put on a siding, the engine fire banked, and the crew rests—on the engine.

While this all might seem to be an odd way to run a railroad, the nature of the country through which it operates is such that it would be most difficult to apply modern methods.

The road is divided, running west, into four divisions of 131, 136, 136, and 144 miles each. Along the entire length of line there are only two industrial towns, both of them producing pulp and paper. Chief revenue is derived from freight movements from St. John's to the outlying districts where the population is scattered in small villages located in many cases on inlets from the Atlantic Ocean or the Gulf of St. Lawrence. A fleet of small coastal steamers is owned and operated by the railway, and these ships, with the trains, constitute the chief means of intra-island communication; the tieup explains why all Newfoundland passenger trains are always connecting either with boat arrivals or boat departures. General merchandise is wholesaled out of St. John's to stations along the railroad and to ports on the routes of the coastal boats. Considerable freight in less-than-carload lots arrives through Port-aux-Basques via the gulf boat. Farm produce is grown for the most part along the 144-mile Western Division, and all of this is shipped by rail to points along the road. Port-aux-Basques and St. John's are ice-free ports but most of the others are closed during the winter.

Since 1940 the road has been operating at a profit. In 1942 the profit was a million dollars, and better earnings are in prospect for the future. Both of the paper mills are located near seaports but much of their raw wood is hauled by the railroad, and during the winter

as it is today. Notice the facilities for railroad - to - boat interchange.

these mills provide about 40,000 tons of paper which is hauled to the ice-free ports. The peak wood tonnage in both long and short hauls has been a little less than 200,000 tons yearly.

When the American military organizations moved into Newfoundland late in 1940, they were quite appalled by the leisurely operation of the 42-inch-gauge Newfoundland Railway. The United States promptly provided two million dollars for new equipment and put a number of U. S. Army Mikado locomotives in pool with the others on the road. Much of the new equipment was lost on ships sunk by German submarines. In 1943 the road received a number of new reclining-seat coaches, 57 feet long and approximately 43 tons in weight. New baggage and dining cars are to be added and the Americans expect the cross-country service to be improved in the immediate future.

To understand the Newfoundland Railway one must know something of the Newfoundland people and something of the history of the road. The economics of the country are complex, and much of the railroad's history is entwined with that of the country.

When in the 1840's a promoter envisioned a railway as a means of speeding up trans-Atlantic traffic, he proposed a line from St. John's to Port-aux-Basques along the southern coast. The line was to have been a little over 300 miles long. The route was surveyed but the deal fell through. For 40 years the politicians wrangled over the railroad problem and a number of contractors went broke on preliminary work. Many still held out for the south coast line; fast ferries would carry passengers across the gulf, and the Newfoundland Railway would rush them to dockside at St. John's, where they would embark for Europe. It would have speeded up the slow Atlantic crossings at the time, but when the country settled down to the actual building of the road, improvements in ocean ships and the clamorings of the politicians made the southern route less desirable. Out of the wrangling came the present line, which traverses 540 miles to reach a point not more than 350 miles distant. Short branches added from time to time made the total mileage about 985, but abandonments in recent years have reduced this to a little more than 700. Construction involved some complex financing which seems not to have been understood by some of the worthy legislators. When the legislature was meeting during its final stages in the early 1930's (Newfoundland now has no representative government) much time was being given to debating the "'98 Contract" concerning the building of the railroad.

The railway was operated privately until in the 1920's, when the operating contract ex-

pired. Actually the private operator went broke, and in 1922 the entire railroad shut down for a week. Enginemen out on the line took their engines and went back to their home divisional points, on their own time, burning government coal.

When the government took over the line it had a six-million-dollar deficit which was increasing at the rate of three million dollars annually. The roadbed needed ballast and the rolling stock, including locomotives, was obsolete. The shops outside St. John's had never been equipped to make major repairs, and what facilities were available were badly in need of rehabilitation.

Compared with the road of 1922, the Newfoundland Railway of 1944 is a modern, up-to-date line. Locomotives are patterned after their big brothers on Canadian and American railroads. Fuel is obtained from Wales, West Virginia, and Nova Scotia; about 70,000 tons of coal is consumed annually. The road, having to import all of its coal, may seek either a change of fuel or type of power in the future. Diesel switchers are being considered. In the 1930's a number of runs were made with a road engine equipped for oil burning but the project was dropped.

The railway uses station-to-station dispatching and no roadside signals other than semaphores at stations. Both freight and passenger-train crews usually include one man who is a telegraph operator; this is especially true in winter. Portable telegraph sets are carried and stalled trains report their position by "cutting in" on the telegraph line or by reporting from the nearest of numerous "cut-in" boxes.

The government has modernized the equipment as fast as available funds have permitted, but very little has been done to educate personnel in methods of running a modern railroad. The consequence has been, on the one hand, a struggle to improve the physical plant of the system and on the other hand an ingrown opposition to improvement.

The road is "captive" to the extent that it must depend, for the most part, on domestic traffic which in normal times is insufficient to support it. Water-borne freight from the United States and Canada has been a profitable business to the shipping companies operating in the trade, and after the government took over the railroad it engaged in this traffic. The indications are now that the road will expand this service after the war so that a joint rail and water system may be operated profitably.

When the road was in private hands, the management consisted of foreigners whose ideas regarding the welfare of the country were quite counter to what the natives considered good The present management is home-grown and highly capable. The road is showing a consistent profit where for many years it was a drain on the financial resources of the country, which was called upon frequently to replenish the coffers of the operators.

A VISITOR going to Newfoundland via the gulf boat steps on the dock at Port-aux-Basques early in the morning; when the fog lifts he finds that the *Overland Limited* is standing on a track a few steps from the ship's side—actually on the dock. To the Newfoundland railroad men the train is "on top of the wharf" and ready to head east when passengers, mail, and baggage are loaded. Breakfast may be had on the train, but you must not rush the steward—this is part of a system that is not in too much of a hurry. Although the menu does not give your taste much leeway, the atmosphere is informal and congenial.

The trip is a kind of community outing. During daylight hours large segments of the village populations trek to the railway station to see the trains arrive and depart and to exchange small-talk with the crews and passengers. The spirit of camaraderie is due to a number of factors. A Canadion officer states that on a trip he made in 1943 the train ran up to 48 hours late but that frequently it stopped at lonely way-stations while the engineer passed the time of day or night with the telegraph operator, picked up a pair of dead rabbits for his Sunday dinner from a section hand, or just simply stopped and started again. Flag stations on the line are probably as numerous as regular stops, and a letter to a neighbor in the next village may be reason enough to stop a passenger train.

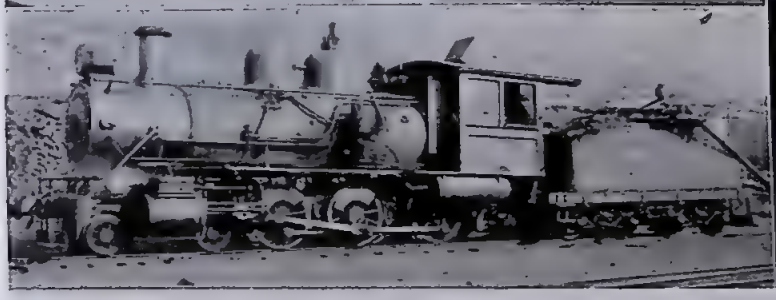
In the not-too-far-distant past a passenger was welcome to ride the front end for the asking; railroaders from the United States and Canada always found themselves welcome in the cab, where they would be plied with questions regarding railroading in the States, or where they might listen to the engineer expound on the virtues of the North British Mikes versus those made by Baldwin.

A source of revenue in normal times is the large number of sportsmen from the United States and Canada who visit the salmon streams

on the west side of the island. Dozens of streams, teeming with fighting fish, cross and recross the railway, and to these the anglers flock in the summer months. During the fishing season a passenger train will stop anywhere to pick up home-bound sportsmen or to drop off those who are pleasure bent; on his first trip over the line a foreigner is slightly amazed at this practice. He is further amazed when he learns that conductors, baggagemen, and other train hands act as postmen and couriers of sundry merchandise for Yankee and Canadian fishermen when the salmon are running. On my last trip west on a Newfoundland Railway train the conductor and several New Yorkers exchanged cordial greetings, and after taking tickets the "con" passed around packets of mail taken off the eastbound trains some time earlier.

It is not likely that the Newfoundland Railway will ever return to private operation. At present the island's 300,000 people are governed by a Commission of Government consisting of Newfoundland officials of the old Representative Assembly and an equal number of "commissioners" from England, all responsible to the British Crown. This form of government replaced the Assembly which collapsed during the bad days of the 1930's. With the record of private operation to point to, it is most unlikely that any future Assembly (it is expected that this form of representative government will be restored) will turn the railway back to private operators. The island has no cross-country roads and the railway enjoys a monopoly on transportation other than local in the larger towns.

Following the war, planes may cut heavily into the foreign passenger traffic with the railroad serving only as shuttle service for plane-borne passengers. Roads will be built also, but as the country is opened up by roads and planes the railroad will benefit too from the increased business activity. In the long-range picture it appears that the best years of the Newfoundland Railway are yet to come.



The 1002 (top) is a product of the North British Locomotive Works. Shown at St. John's is No. 1, a "shunter." The 196 was built by Baldwin. The fourth picture shows a first-class wooden coach. No. 500 is a U. S. Army locomotive, built by American Locomotive Company. The lower photo is a view of the St. John's station just after the arrival of the Overland Express from Port-aux-Basques.

Cumberland Narrows

MANY of the long, sharp Appalachian Mountain ridges are split by narrow water gaps carved out through the centuries by the rivers. One of the more important gaps used by trunk-line railroads in crossing the mountains is just north of Cumberland, Md., and through it run the main lines of the Baltimore & Ohio and the Western Maryland as well as less important lines of the Pennsylvania Railroad and the Cumberland & Pennsylvania.

Here the sharp bark of steam locomotive exhaust and the roar of Diesels never stops echoing as the WM and B&O trains work westward toward their Allegheny summits or purr eastbound into Cumberland, an important division point.

Only the B&O has passenger service through the Cumberland Narrows, on its main line between Washington and Pittsburgh. Trains 21, 22 and 8 travel not only the Narrows, but the entire scenic Allegheny crossing in daylight.

Baltimore & Ohio.

Summit of the line is at Sand Patch, 30 miles northwest, and returning helpers from Sand Patch help to keep the rails bright.

The Narrows are not hidden away in some remote mountain corner, but are only two miles from Cumberland, a city of 40,000 served by excellent passenger service on both Baltimore & Ohio and Western Maryland. Extensive terminals in Cumberland and the nearby mountain grades make this a point worth visiting.

The general view of Cumberland Narrows at far left shows how both Western Maryland (left side of gap) and Baltimore & Ohio use the narrow gash through Wills Mountain into Wills Creek Valley. Pennsylvania Railroad has trackage rights over Western Maryland; Cumberland & Pennsylvania, over the B&O. An interurban line once used the gap. The B&O freight below is at Cumberland & Pennsylvania Junction.

Frank Quiz

A genuine Mallet articulated compound (notice the large front cylinders) of 2-8-8-0 wheel arrangement bites into the upgrade in the Narrows with a B&O freight. A pusher decorates the rear of this and most other westbound B&O freights up Sand Patch grade. The three mainline tracks allow extra capacity for the many downgrade movements of light engines.

B&O's ponderous Santa Fe type locomotives do much of the freight work on Sand Patch grade. Here a double-header of 2-10-2's works westward, exhausts sometimes beating time together and sometimes getting out of step for a quickening double-time rhythm. Above the Narrows, new retaining walls control spring floods.

West of the Narrows the broad valley of Wills Creek makes a fine natural highway for B&O trains. Here is No. 22, the Washingtonian, sliding easily downgrade toward Cumberland.

The Baltimore-Elkins train stops in Western Maryland's Cumberland station. Trip from Baltimore to Cumberland can be made on Western Maryland with return on B&O. The two railroads are on opposite sides of the Potomac below Cumberland as far as Cherry Run, where much B&O freight is turned over to Western Maryland for delivery to the Reading for upper seaboard points.

Western Maryland's powerful and relatively new 4-6-6-4 articulated locomotives are often seen in action on the well-kept main line through the Narrows. Double-tracked all the way to the summit at Big Savage Mountain, this road maintains a steady climb of 1.75 per cent. Branch line cutting in at left of picture is used by Pennsylvania route from Altoona.

A Western Maryland fast freight starts the climb out of the Narrows. This, the Connellsville line of WM, was built in 1912 to connect with the P&LE, thus creating a new through-route.

With the Narrows behind it, a B&O westbound freight lumbers around a jagged corner of the mountain into Wills Creek Valley. Out of the picture to the right is the Western Maryland, making a similar curve through the truss bridges which can be seen in the background of the large photo on page 36.

This view of B&O train No. 9, the New York-Chicago Express, in the Narrows shows the rocky escarpment which fringes the upper edge of the cleft in Wills Mountain. On the head end of the train is the 5510, lone Class T-1 Mountain type. This experimental engine with the then-high boiler pressure of 250 pounds was built along with the 5550, Class T-2, in 1930.

All photos on these pages by Robert F. Collins.

New Milwaukee 4-8-4

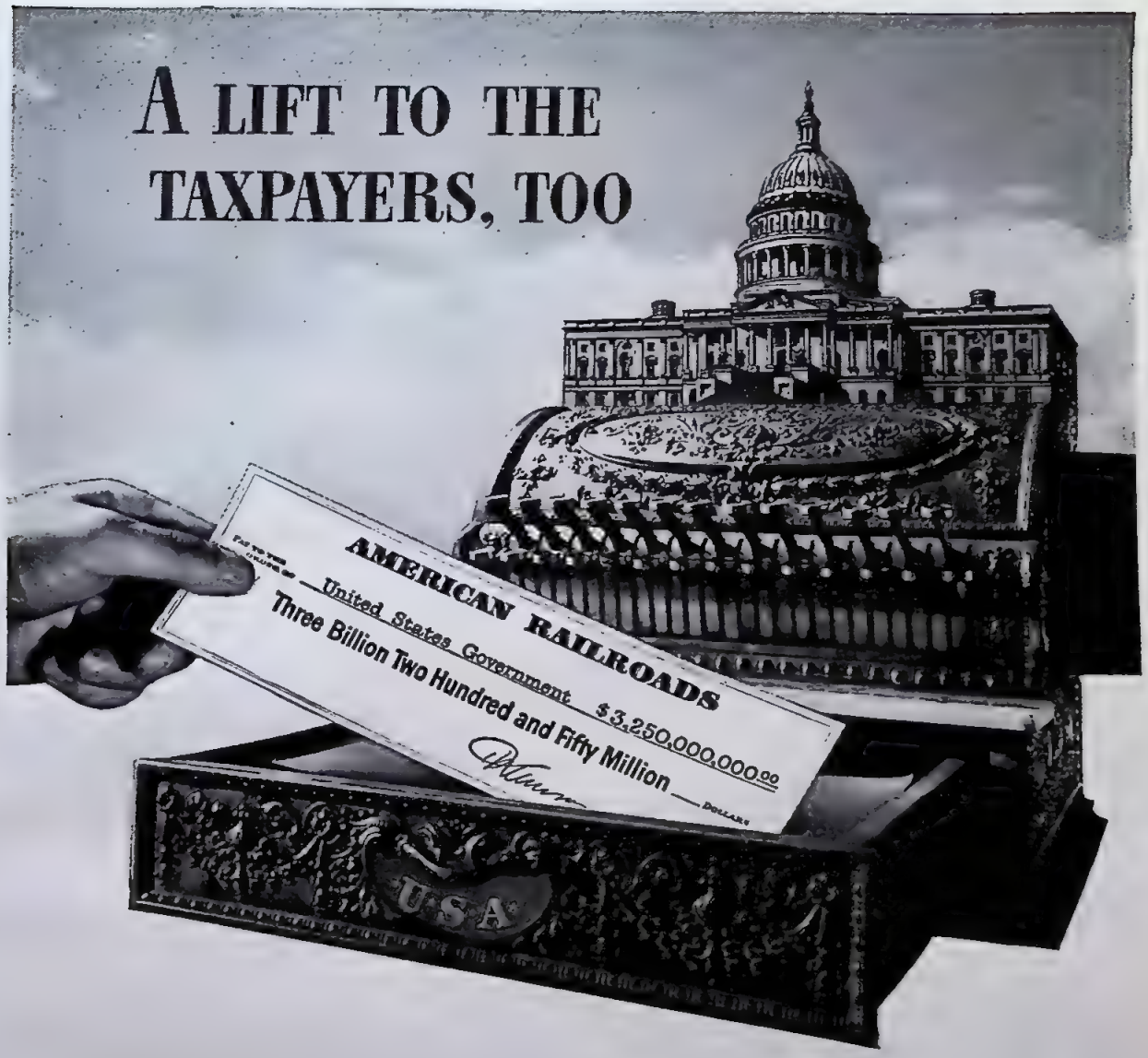
THE Milwaukee Road's new 4-8-4 locomotives, Class S-3, not only look different from the earlier S-2's (see photos), but they look unlike any other locomotives seen on the road in recent years. Perhaps the fact that the new power is a Delaware & Hudson engine with Union Pacific tender has something to do with appearances!

Because of War Production Board restrictions the road had to use an existing design for new locomotives. But the operating department wanted a 4-8-4 lighter than the S-2, an engine which could be used more generally on all lines of the system. Instead of engineering a locomotive to just meet requirements the mechanical department had to go shopping, so to speak, and found that the D&H 4-8-4 [see October 1943 TRAINS] most nearly filled the bill. It was given a Milwaukee Road vestibule cab, and a few other slight changes were made to fit it for the intended service.

The Milwaukee now has 52 4-8-4 locomotives, two of the original S-1 class, 40 of the S-2 class, and the 10 new S-3's.

Principal Dimensions:

	S-2	S-3
Road classification	S-2	S-3
Road numbers	201-240	260-269
Date built	1937-38-40	1944
Tractive effort, lbs.	70,800	62,000
Cylinder diameter and stroke, in.	26 x 32	26 x 32
Driver diameter, in.	74	74
Weight on drivers, lbs.	282,320	259,300
Weight on pilot truck, lbs.	87,800	87,000
Weight on trailing truck, lbs.	120,330	113,700
Weight of engine, lbs.	490,450	460,000
Weight of tender, lbs.	397,000 [fully loaded]	291,200 [2/3 load]
Steam pressure, lbs.	285	250
Grate area, sq. ft.	106	96.2
Evaporative heating surface, sq. ft.	5509	4475.5
Tender capacity: Gals. of water	20,000	20,000
Tons of coal	25	25



IN THIS WAR the railroads have done twice as big a transportation job as in the first World War.

But they are doing another job which may not be so well known, as is shown by these contrasting facts:

In the last war, the operation of the railroads took money out of the United States Treasury.

In this one, the railroads are putting money into the Treasury.

In the last war, when the Government took over the railroads, even though freight rates and passenger fares were raised, Congress had to appropriate more than $1,600,000,000 to meet deficits.

In this war, the railroads have been managed by their owners. A far bigger and better transportation job has been done. And, since Pearl Harbor, the railroads have turned into the United States Treasury the tremendous sum of $3,250,000,000 in taxes—and today are paying federal taxes at the rate of nearly $4,250,000 every 24 hours.

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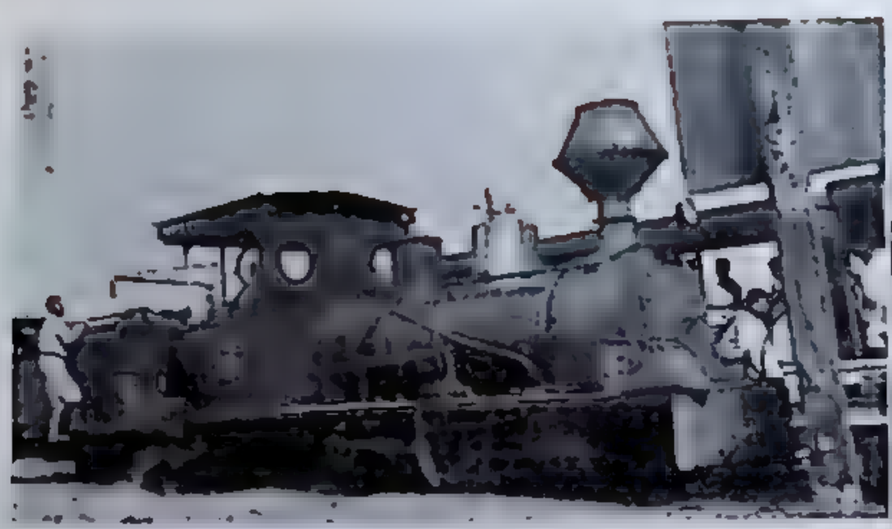


Lt. J. W. Maxwell.

FIJI RAILROADS

(From a letter by Lt. John W. Maxwell.)

I was on the Fiji islands for two years—much too long! We were on the island of Viti Levu, the largest in the group. The unique point of interest is the two-foot-gauge railway on which is run the only "free" passenger service in the world.

The line is extensive for such small gauge, there being about 400 miles of track in all. This amount is divided between five sugar refineries; the biggest expanse serves the Lautoka and the Mba mills on the west side of the island. It runs from Lautoka to the south 80 miles to Singatoka on the southwest end of the island, from Lautoka north and east 24 miles to Mba, and east of Mba 17 miles to Tavua. It has many permanent spurs and branches and also has portable field tracks which are laid down in sections just like toy track.

Lautoka locos Nos. 1 to 9 were built by J. Fowler & Co. of Leeds, England, and are 0-6-0's (except No. 9, an 0-6-2). All have saddle tanks with coal tenders in addition.

Nos. 10 to 17 and 20 to 22 are 0-6-0's, built by Hudswell, Clark & Co. of Leeds. Nos. 10 to 17 were built between 1912 and 1915, while 20 and 21 were built in 1936 and No. 22 in 1938.

No. 18 is the passenger engine, a 4-4-0, built by Hudswell. On Mondays it runs from Lautoka to Mba and back; on Tuesdays to Singatoka, returning to Lautoka on Wednesdays. It repeats these runs during the latter part of the week.

No. 19 is an 0-4-0T used as switcher in the refinery. The road also has some gasoline power switchers and inspection cars.

Trains are run without orders or block signals, as their speed is only 10 miles an hour. The crew consists of only the engine driver and fireman. The last car of a train is marked with a disk or tree branch. The engine crew can thus look back to see if the train is all there.

The cars are predominantly cane trucks but there are also some four-wheel hopper cars used to haul the coal brought from Australia, some 400-gallon tank trucks for hauling molasses, and a few double-truck flat cars. None of the cars have brakes. Couplers are simple buffers with attached hooks for coupling.

My pictures show No. 11 at Thura with an Indian crew, No. 18 leaving Thura with a passenger train, No. 4 with a load of sand bags near Nandi, and a closeup of the couplers and buffer. The chain and ratchet are for holding cane.

Old Irish Monorail Railway

M. T. E. Meats, 82 Wood End Lane, Erdington, Birmingham, England.

Only railroad of its kind, the Listowel & Ballybunion Railway operated in Ireland from 1888 to 1924. Lartigue, its inventor, termed it a monorail system, though other people preferred to call it a three-rail type.

Locomotive and cars were suspended from a central running rail weighing 27 pounds per running yard, mounted on a trestle three feet high. Each side of the trestle carried a light guiding rail near the base. Such track construction presented difficulties at highway and pedestrian crossings. At the latter, a section of track was swiveled to form a gate. Roads crossed by means of a form of drawbridge with ramps built up to rail level. The lowering of the drawbridge set signals at the danger position.

The Listowel & Ballybunion was 9¼ miles long. The Lartigue system was adopted because of the substantial savings it afforded in track construction. Trackage followed the contours of the country, thus avoiding costly cuts and fills.

The three locomotives, built in England by the Hunslet Engine Company, each consisted of two separate boilers and cabs suspended from the running rail on three coupled axles with wheels of 24" diameter. Two 7" x 12" cylinders drove the center wheel. Booster engines were fitted to the tenders, which also ran on 24" wheels. Curves of 100-foot radius could be maneuvered with ease. Highest speed attained was 27 miles per hour, and each locomotive could haul 140 tons on the level or 70 tons on a 1 per cent grade.

Passenger cars, built in England, were fitted with stairs to allow passengers to pass over the track. Most of the freight stock was built in Belgium, as was the track.

Charles M. Clegg Jr.

School on Wheels

To educate children in the out-of-way places in Newfoundland, this "school car" is used to transport the three R's over the Newfoundland Railway. (See article on the Newfoundland Railway, page 30.)

Wartime Dining Service

The dining car has taken as much of a wartime load as any part of railroad service, and with the problems of food rationing added to the usual difficulties of no new equipment and shortage of personnel. The Great Northern, for instance, served 728,486 meals on diners in 1940, but served 2,754,635 during 1943—all with the same dining cars and crews!

"Principal Dimensions"

Starting with this issue, the subheading on our locomotive plates will read "Principal Dimensions" instead of "Specifications." An engineer pointed out that there have never been any specifications listed with our locomotive plates because "specifications" are detailed lists submitted by the designer to the builder. We looked it up and by golly he was right.

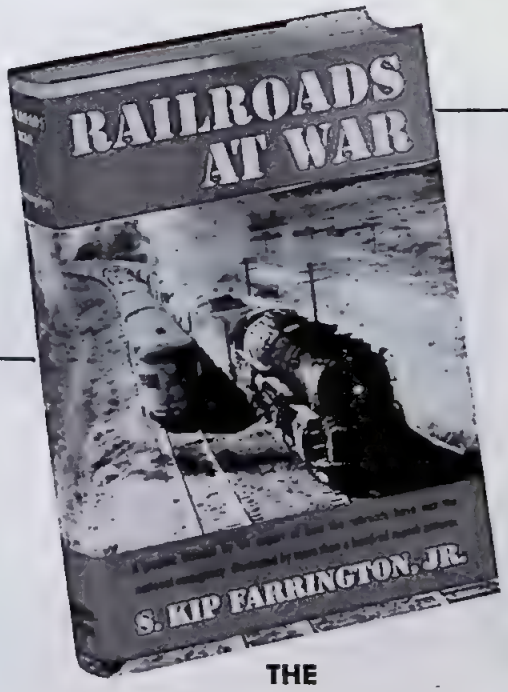
Timetables

The traveler used to condemn the railroad timetable as an abomination and predicted that one day some ingenious person would appear and show the railroad "mossbacks" how to compile schedules in simple and entertaining form. It is significant that the air and bus lines, in issuing their timetables, have adopted the "make-up" used by the railroads for years.

W. R. Osborne, 2331 S. Broad St., Trenton, N. J.

Ballast-Cleaning Machine

To clean the ballast on its right of way, the Pennsylvania Railroad uses a train like the one pictured above at Trenton, N. J. The cable on the drum is attached to a locomotive stationed down the track, acting as a block. Power on the ballast-cleaner car revolves the drum and hauls the entire train at a uniform slow place. The dirt from the ballast is discharged into the cars by an overhead conveyor line.



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. . . after the war the Illinois Central Edgewood Cutoff freight line could be utilized for a new high-speed passenger service linking the growing metropolis of Paducah, Ky., with Chicago? A schedule of perhaps five hours could be arranged by use of an independent train or with one operated as part of a new high-speed special passenger service linking Chicago with either Memphis or New Orleans via the Edgewood Cutoff.

Illinois Central Fan.

. . . the railroads issued, probably through the Association of American Railroads, a reduced-rate mileage book, good on all lines, which would make travel more economical and convenient for the man who uses railroad service for more than 5000 miles a year?

Albert Carpenter.

. . . a through service between Washington and Montreal could be run via Jersey City, the West Shore Route of the New York Central, Albany, and the Delaware & Hudson? The B&O would probably be used between Washington and Jersey City, thus being competitive with the PRR, New Haven and Central Vermont route.

Joseph Carter.

. . . the Denver & Rio Grande Western, after the war, were to run tourist trains once a week during summer around the entire narrow-gauge loop, including arranged hotel stop-over points?

Charles Chapel.

All contributions to this department must be addressed to "Wouldn't It Be Nice If" Editor, Trains, 1027 N. 7th St., Milwaukee, Wis.

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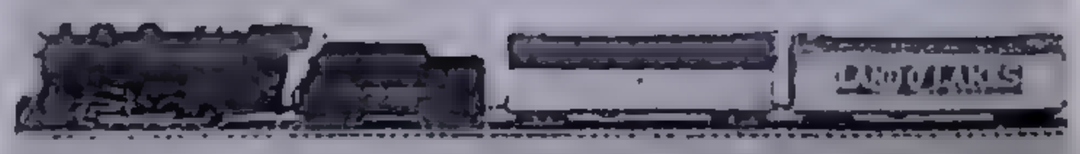

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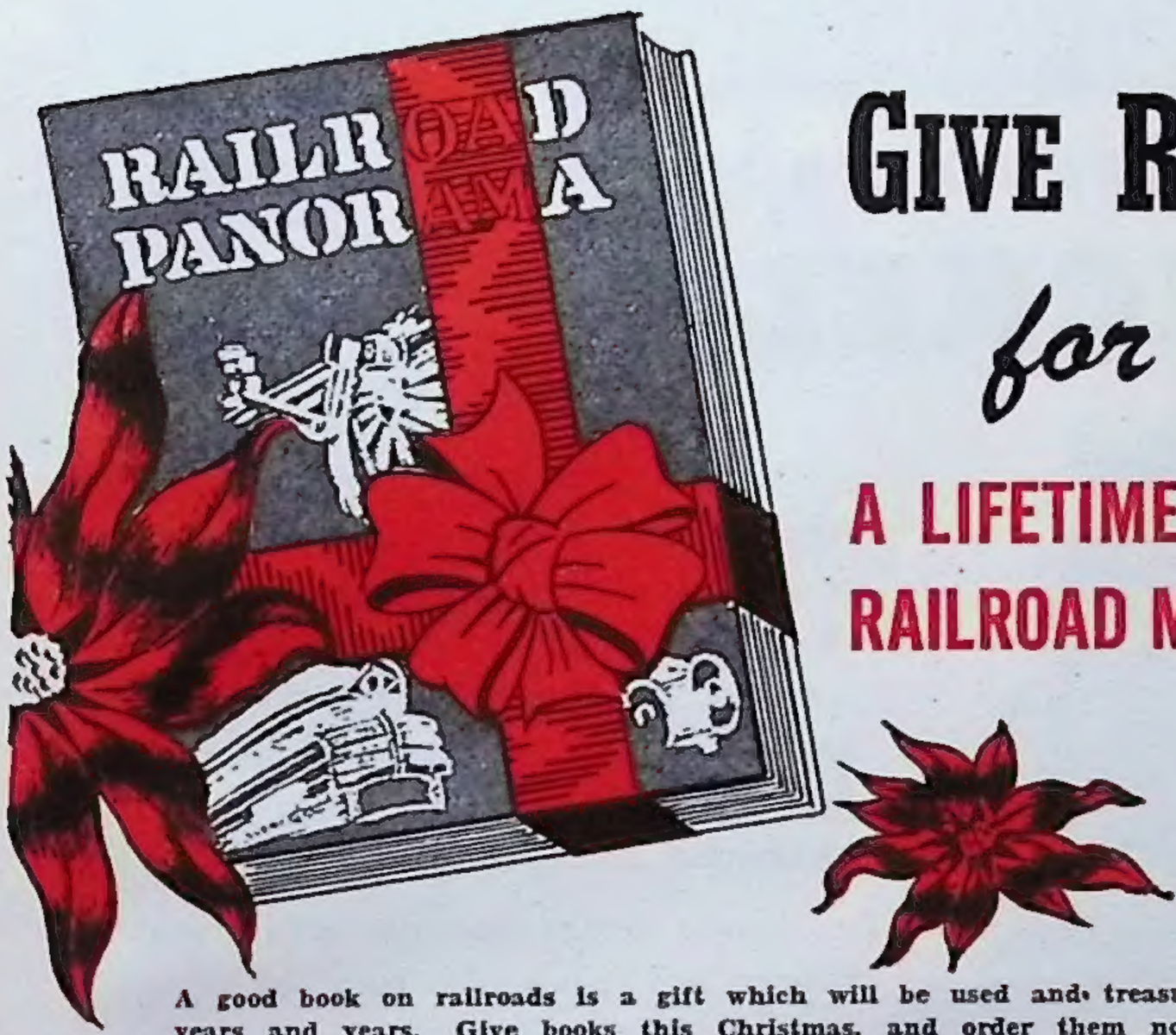

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GRAHAME H. HARDY
538 15TH ST., OAKLAND 12, CALIF.

Correspondence

The influence of Ellicott's Mills, terminus of the first American railroad, extended through the years to at least one member of the Ellicott family. Ellicott's Mills, at the time the railroad was built, was owned by the grandfather and granduncle of Henry W. Ellicott, who died May 30 of this year at San Mateo, Calif., at the age of 85. Mr. Ellicott had been in the railroad business since 1892 as lumber inspector, later lumber and fuel agent and then assistant manager and assistant purchasing agent of Southern Pacific. Still later he was with the Northwestern Pacific as general purchasing agent and later as treasurer. He was also a direct descendant of the Mr. Thomas who was the first president of the Baltimore & Ohio.

William S. Wallner, Northwestern Pacific RR. Co., Redwood Empire Route, Sausalito, Calif.

Your Timetable Oddity [September TRAINS] reminds me of another I ran across just the last week. L&N train No. 21, Louisville to Lynch, Ky., lays over on a siding from 11:50 p. m. to 4:50 a. m. on its daily run; and its companion No. 24 lays over at Corbin from 11:15 p. m. to 3:34 a. m. On the timetable (No. 23), the No. 21 train appears to originate in Corbin, but I am told that such is not the case; passengers boarding it before it reaches Corbin for destinations beyond Corbin actually remain in the coaches during the five-hour layover.

John P. DeCamp, Director of Publicity, University of Cincinnati, Cincinnati 2, O.

I have been told that Turcot Yard (Montreal) is the busiest place in Canada, and I can believe that. On the recent day that I was there, there was plenty of power and a real variety, from the lowly 0-6-0 to the giant 4-8-4. The hostlers devise all means and variety of coaling the power in the easiest and quickest way, and it sure was fun to see them move those engines around and get them in and out of the house—serviced and on the spot for the next run. I have been to Turcot many times since 1933 but I never saw as many locomotives as I did that Friday afternoon.

Edwin K. Heath, 16 Nelson St., Barre, Vt.

The first New York Central 4-8-2 locomotive was built in 1916, not in 1924, as you stated in September TRAINS. Several hundred of these locomotives were in service by 1924.

Clare E. Pierce, P. O. Box 385, Jackson, Mich.

[A rap on the knuckles to our locomotive editor for misinterpreting a statement that the 1924 experimental locomotive was the first of the Mohawk class. It was a new design especially for high-speed freight service, but, as Mr. Pierce points out, not the first NYC 4-8-2.—*Ed.*]

Why isn't a concerted, visionary effort made to *improve* branch-line service by the use of fast-pickup, high-speed, comfortable and clean Diesel streamliners, one- or two-car jobs of handsome, modern lines, to attract or retain patronage and fight the drift to other modes of transport? Abandonments are the *result* of poor service by uncomfortable, slow-moving trains in an age of speed—not the cause.

CWO R. P. Steinbach, U. S. Army.

I enjoyed the article on the railroads of Montreal. The author missed one trick in describing the Canadian Pacific line to Woodsville and Boston via B&M. This line crosses the frontier not only once, but thrice—the timetable reads:

Miles From Montreal		Miles From Montreal	
68.8	Sutton, Que.	84.9	Glenton, Que.
74.3	Abercorn, Que.	91.0	Highwater, Que.
76.8	Richford, Vt.	93.5	North Troy, Vt.
80.1	Stevens Mills, Vt.	100.0	Centre, Vt.
81.9	Missisquoi, Vt.	107.8	Newport, Vt.

Albert Sprague Coolidge, 34 Coolidge Ave., Cambridge 38, Mass.

Q-2 and Q-t

A railroad publicity man will stop at nothing. Lou Henderson, regional publicity representative of the Pennsylvania Railroad at Chicago, just happened to be around with a cameraman when one of

the 26 new Q-2's pulled in. Then he saw a beautiful girl, and through his mind flashed the thought. "Beauty and the Beast!" Quickly Lou got everyone concerned together and we have the accompanying picture as the result. Of course, Lou, you know it is not necessary to resort to tactics like this just to get a picture of a PRR locomotive in TRAINS. . . . Oh, yes, Q-t's name is Evelyne Hugo. Address and phone number not furnished.

The judges are now grading the entries in the recent Trains Competition, and expect to have the winners picked in time for announcement in this column next month.

One of the very best sources of guidance for the railroads is the traveler. He compares the operations of the various lines over which he travels—something no operating officer can take time off to do. He sees all and wants to talk. For that purpose TRAINS has started a new department, first appearing on page 44 of this issue under the heading, "Wouldn't it be nice if . . ." Get your ideas and suggestions in writing and send them to the "Wouldn't It Be Nice If" Editor.

The annual index for Volume Four, November 1943 to October 1944 inclusive, is included with this issue for all direct-mail subscribers of Trains. Other readers may obtain one free by writing for it.

Kalmbach Publishing Co.
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FACT OR FICTION?

NORTHERN PACIFIC
YELLOWSTONE PARK LINE

A 47-SECOND TEST ON
ELECTRONICS
AND
ELECTRICITY
IN RAILROADING

Q. Thirteen messages are carried simultaneously on a single pair of wires, by new Northern Pacific communications system. Fact or fiction?

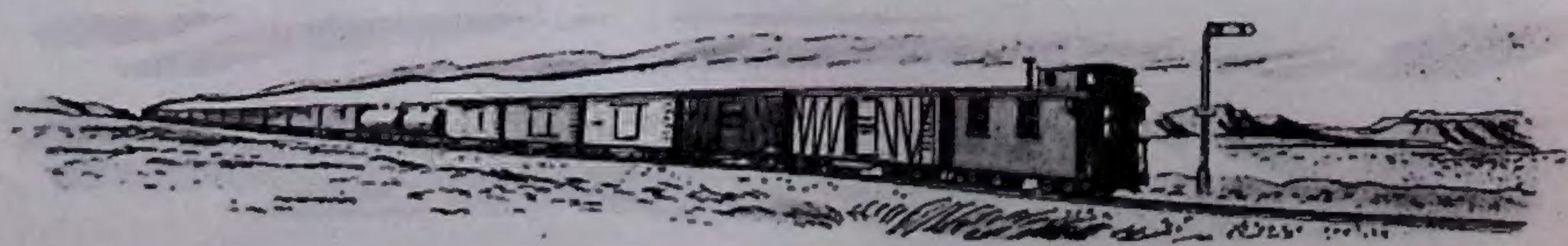
A. Fact. Electronic vacuum tubes enable three telephone conversations and ten telegrams to ride on one circuit . . . a marvelous new aid to railroad operations.

Q. N. P. shop "doctors" use magic powder to diagnose "that tired feeling" in locomotive parts. Fact or fiction?

A. Fact. Iron filings, used with electronic Magnaflux, reveal internal fatigue spots. "Sick" metal is instantly scrapped.

Q. Electrical fencing, installed in mountains by N. P., is used to discourage foolhardy climbers. Fact or fiction?

A. Fiction. It's a safeguard for trains, flashing instant "stop" signal if moving rock touches the fence at any point.



Q. Electricity in the rails controls stopping and starting of N. P. trains. Fact or fiction?

A. Fact. Electrical impulses carried through the rails operate 3,867 block signals on the Main Street of the Northwest.

NORTHERN PACIFIC

Main Street of the Northwest